

INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week
Quotes of the Week
Bob Is 18
How To Figure It
Another Riddle
Next Contest
Quotable Quotes
More Than Expected

Stories of the Week

Candidates for the governorship of Michigan this year include "Soapy" Williams (Democrat incumbent) and Fred Alger (Republican aspirant). Both are silver- spoon inheritors of great wealth, and grew up together in Grosse Pointe, a suburb of Detroit.

Despite this handicap they are working like horses to win. A Grosse Pointe friend of Mrs. Alger sympathized with the latter's campaign loneliness.

"Don't suppose you've seen Fred for quite awhile, have you?"

"Why, yes; as a matter of fact, I saw him Tuesday night . . . on television."

A six-years-old Israeli arrived in Holland recently and was awestricken with the amount of food in the hotels and well-stocked shops. Perplexed by the display, she asked, "Mummy, isn't there any government in Holland?"—*Jerusalem Post*.

Quotes of the Week

"We have become so keyed up and nervous that it is almost impossible to put people to sleep with a sermon. And, I tell you, that's a bad situation."—*REV. NORMAN VINCENT PEARLE*.

"If I were asked to say in one word what it is that young Americans are chiefly writing about nowadays, I should answer 'loneliness.'"—*CHRISTOPHER ISHERWOOD*.

"The sign of a high intelligence is the ability to dissociate ideas that are traditionally bound together, and to separate truths from the emotions they become wrapped in. Our tragic incapacity to make this separation is responsible for almost all the wars and social catastrophes of mankind."—*SYDNEY J. HARRIS*.

Bob Is 18

Of necessity "Inside Dope" is written from three to six weeks in advance of publication. Hence, the conductor of this column sometimes forgets what went into it.

One night recently we returned from a trip and, as is our practice, stopped at the office to look over accumulated mail. On top of the pile was a note which said, simply:

"Bob is 18."

That puzzled us no end. It also stopped Editorial Director Redeker, a walking encyclopedia, who usually has answers for everything. Shaking our heads, we turned to the next letter. It said the same thing, but a little more completely.

"Bob is 18" is the correct answer to a puzzle which appeared in this column June 16.

First answers to arrive finished in a dead heat, according to the time-stamps affixed thereon by our Receiving Department.

The winners:

Warren L. Trafton, United-Carr Fastener Corp., Boston, Mass.

E. W. Mason, Aluminum Co. of America, New Kensington, Pa.

Robert C. Hawkins, Ajax Corp. of America, Evansville, Ind.

W. F. Patrick, General Electric Co., Bloomfield, N. J.

These perspicacious gentlemen all will receive copies of "The Mysteries of Blair House," by Roy Eastman (chosen as one of the 50 books of the year, and published by our Conjure House book division). Now we'll see if these smart fellows can figure out the solution to a jim-dandy detective story.

Closely following—again identified by the timeclock stamp—came correct answers from:

R. E. Cocklin, Refrigeration Economics Co., Canton, Ohio.

D. D. Denny, Modern Market Fixtures, Dayton, Ohio.

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ASRE Hears Atomic Irradiation Won't Doom Refrigeration

ATLANTA — Atomic irradiation can sterilize foods, but this doesn't mean that preservation of foods by refrigeration is doomed, the American Society of Refrigerating Engineers was assured at its 39th spring meeting here.

"I want to dispel any fear that you may have of how atomic irradiation can be used; I think it can help the refrigeration industry," the group was told by Dr. L. E. Brownell, who has been directing research into the subject at the University of Michigan.

"Radiation is just another means of sterilizing foods and it can be done without the extremes of cooking such as required in canning. However, I'm sure that even sterile foods can be kept longer under refrigeration than without it," he said.

Pointing out that this research is supported by both the Atomic Energy Commission and the Michigan Memorial Phoenix Project, and that one of the contributors to the latter is Nash-Kelvinator Corp., Dr. Brownell commented:

"I'm sure Mr. Mason is not afraid it will hurt the refrigeration industry."

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Bostwick Is McCray General Sales Mgr.

KENDALLVILLE, Ind. — J. W. "Wally" Bostwick, long associated with the refrigeration and air conditioning industry, is now general sales manager for McCray Refrigerator Co. here, manufacturer of commercial refrigerators.

R. E. Abbott, who headed up McCray sales, has been advanced to the position of Vice President—Operations, in which position he will coordinate the manufacturing and engineering operations of the company.

Bostwick was most recently vice president and general manager of the Betz Corp. Prior to that he was vice president of the Ajax Corp. of America, sales manager of the Electric Refrigeration Div. of Servel, Inc., and manager of the Heating and Air Conditioning Div. of Fairbanks, Morse & Co. He has been active in industry association affairs.

NEMA Refrigerator Sales Pass Million In April

(See Table on Back Page)

NEW YORK CITY — Refrigerator sales, as reported by 16 member firms of the National Electrical Manufacturers Association, staggered past the million mark in April, 44% behind the pace set last year.

Sales for the first four months numbered 1,106,384 units. At the same time last year, they numbered 1,949,112. In 1950 they were slightly higher than in '51.

During April alone, 255,009 units were moved, 15% fewer than in March and 45% less than in the same month of 1951.

Bright spot in the April picture was a sharp upward climb in sales to Canada. These numbered 11,508

(Concluded on Back Page, Column 1)

Credit Controls Lifted, Most Others Extended

WASHINGTON, D. C. — The government lost its right to control consumer credit last week when President Truman signed the new controls bill into law. The new law, however, does the following things:

1. Keeps price controls on nearly everything until April 30 of next year. But, sellers will not have to meet OPS reporting requirements if their prices are below ceiling. They will just have to certify that the particular item is being sold below ceiling. Congress expressed its desire that price and wage controls be ended as rapidly as possible.

2. Extends the Herlong amendment so that it will apply to OPS regulations issued before July 31, 1951 as well as those issued after that date. The amendment guarantees to retailers their pre-Korean markup. Retailers who took their markup in dollars and cents rather than on a percentage basis are guaranteed their pre-Korean charges.

3. Made clear that the Capehart amendment, which allows producers their highest pre-Korean markup plus cost increases to July 26, 1951, does not apply to wholesalers and retailers.

4. Bars OPS from establishing any price ceilings below minimum fair trade prices as established by individual states.

5. Maintains NPA controls of critical metals to June 30, 1953, but frees firms from any contractual liability if these controls prevent

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Hotpoint Develops Plans To Make Line As Separate G-E Div.

CHICAGO — Hotpoint last week moved closer to the parent General Electric Co. in a corporate sense but further away in a physical sense.

On June 30, the company's name was changed from Hotpoint Inc. to Hotpoint Co. and it became a division instead of an affiliate of G-E. Thus, the concern is now on the same level organizational-wise as other G-E divisions.

However, Hotpoint will continue to function as an independent Chicago company, having its own complement of officers and dealing with local banks and other organizations as in the past.

And despite the corporate change, separation of the manufacturing facilities of Hotpoint and General Electric becomes more pronounced than ever. In process for some time, this

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Tumble Action Washer Tops Bendix '53 Line

SOUTH BEND, Ind. — The 1953 Bendix home laundry line includes as its top model a tumble action automatic washer with a suggested price of \$299.95.

Two flexible tub agitator models complete the line. The fully automatic "Economat" carries a suggested price of \$239.95. The "Dialomatic" is priced at \$199.95.

Drier models, three gas and one 110-220-volt combination electric model, have suggested list prices ranging from \$239.95 to \$299.95.

Both the tumble action washer

(Concluded on Page 25, Column 1)

Poor Maintenance Blamed for Cooling Systems' 'Blow Up'

DETROIT — Under double pressure from an extended heat wave and low pressure in the city's water supply system, many refrigeration and air conditioning systems in the Detroit area have literally "blown up" in the past couple of weeks.

In many cases only rupture discs or safety valves have blown up, but there have been some instances of

In an effort to get as much information on the subject as possible, particularly as it applies to refrigeration and air conditioning, the City Council committee has enlisted the aid of the city's Department of Buildings and Safety Engineering. Head of the latter department, incidentally, promptly phoned AIR CONDITIONING & REFRIGERATION NEWS for assistance in gathering data on the problem of water conservation and ordinances.

damaged compressors and condensers.

One veteran in the service field declares that poor maintenance of systems has been as much at fault as anything. Says he:

"There have been many air-cooled systems that have 'gone down' as a result of over-taxing of equipment due to the high temperatures, which indicates that faulty maintenance can be as much at fault as low water pressure."

"Condensers that haven't been cleaned, systems that are low on refrigerant, plugged valves and other such examples of inadequate check-ups result in disaster when the systems run into the kind of loads we've been having in the past few weeks."

In the meantime, the Detroit City Council was still kicking around an ordinance controlling water use, which had been given tentative approval last week, but which approval was later withdrawn.

The council now wants to delay action until the Water Board comes up with specific rules for application of the water control measure.

Frigidaire Sales Good In May, June

DAYTON — Frigidaire Div.'s business has improved considerably in recent weeks, Mason Roberts, Frigidaire general manager and General Motors vice president, reported recently.

"Movement of all types of appliances to distributors in May and most of June has shown a substantial increase over the same period last year and previous months this year," he said.

The upturn in business has brought about increases in some production schedules and is making it possible to reemploy several hundred employees, he added.

He said future production was uncertain because of the possible

(Concluded on Page 25, Column 4)

Victor Adds 18-Cu. Ft. Upright Freezer to Line

HAGERSTOWN, Md. — Victor Products Corp. here, which has been one of the principal producers of chest-type home freezers, is adding an upright model to its line.

The new 18-cu. ft. "Quickfreezer" upright model occupies less than 1 sq. yd. of floor space and provides storage for 600 lbs. of frozen foods, company officials declare.

The cabinet has four inner insu-

(Concluded on Page 4, Column 5)

Room Cooler Shortage Keeps On Growing

Some Distributors Cleaned Out; Steel Situation May Decide Future Production

DETROIT — The room air conditioner industry last week found itself faced with a situation unique in its relatively short history—a shortage of merchandise.

With the entire country east of the Rockies continuing to sizzle under a hot spell that had sent temperatures near the 100° mark for nearly three consecutive weeks in some areas, there were many distributors and dealers who were forced to say "no, we don't have any," to those who wanted to buy a room air conditioner.

When such a condition prevails in the room air conditioner field before the end of June, the big question is, "will more units be made to satisfy the demand through the rest of this season?"

The question is a legitimate one, because of the known practices of many manufacturers of producing a certain amount of units well before the start of summer, getting these units out to the field, and then closing down their production lines. Whether such producers will start up their lines again is a question, particularly with the steel strike curtailing the output of various components used in the manufacture of room air conditioners. At least one manufacturer has indicated that it will not attempt to produce any more 1952 models.

Fedders-Quigan Corp., one of the leading producers, was working its plant on 10-hour shifts last week to try to fill some of the orders that were coming in from distributors.

"We're cleaned out of inventory and finished units, and most of our distributors are too," declared Frank Mitchell, Fedders-Quigan sales manager. "Our production is going straight from our lines onto trucks and freight cars. Our sales for June will be at least 50% over June, 1951."

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Steel Shortage Closes Some Industry Plants

DETROIT — With steel producers and the union apparently not much closer to getting together than they were at the strike's beginning, and a prominent steel executive predicting that "it looks like a long strike," it seemed likely last week that production of refrigeration equipment and major appliances would be definitely affected.

There were spotty reports of plant closings all over the country, with General Electric closing down its electric range and water heater lines, and declaring that refrigerator and home freezer production would have to halt in about another week. Production of Hamilton clothes driers was cut, and some washer companies announced drastic cutbacks.

Lack of steel will probably also

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One Way To Catch Sales

"CATCHING THE BIRDIE" held in the conditioned air stream moving from an RCA room conditioner, is Adrienne Falcon. This effective display was demonstrated at the RCA exhibit during the Summer Mart. Right now, dealers would like to "catch" some more room conditioners, to meet the intensive demand brought about by the heat wave.

G-E's '10 Extra Calls a Day' Plan Spurs Salesmen To Increase Home Heating and Cooling Sales

BLOOMFIELD, N. J.—A modern switch on the old-style door-to-door salesman was instituted by General Electric Co.'s home heating and cooling department as a windup spur to its big Spring "Clean-Up Sales Campaign."

Labeled the T.A.D. (ten calls a day) plan, each salesman at every distribution level got an additional quota of 10 prospecting phone calls every day for 30 days or until the

end of the campaign.

The "10-a-day" are an extra or plus effort—not substitutes for the salesman's regular daily quota of calls.

According to W. L. Snelje, manager of sales planning for the G-E home heating and cooling department, the 10 extra calls a day based on the law of averages equals business which a salesman wouldn't get otherwise.

'Air Conditioning Fires' Due to Poor Inspection; Miami To Add Inspector

MIAMI BEACH, Fla.—According to City Manager Claude Renshaw, Miami Beach may hire another electrical inspector to help stem the tide of air conditioning fires.

Following a conference with city engineering, building and fire officials, Renshaw said the city's third electrical inspector would be assigned to a special "air conditioning detail."

He pointed out that five air conditioning unit fires were reported in one day recently, and one or two have been reported almost every day since hot weather started.

"Most of the fires are the result of poor inspection of the conditioning units' electrical circuits," Renshaw asserted.

Frozen Food Packers Survey Refrigerated Motor Carriers

WASHINGTON, D. C.—A survey of refrigerated motor carriers is now being conducted by the National Association of Frozen Food Packers.

Purpose of the survey, according to the association's headquarters here, is to assemble comprehensive information on the equipment and services provided by truck carriers.

If adequate data are obtained, a listing of motor carriers, their equipment, and other pertinent information will be incorporated in a directory and made available.



Cool Reception for New Occupant

WASHINGTON HAS ADDED NEW CONTROLS—this time inside the White House to regulate temperature and humidity. This electronic control panel, designed by Minneapolis-Honeywell's industrial division, assures occupants of the executive mansion all-weather comfort. The complex board monitors the action of 106 thermostats in the modernized mansion. These in turn control the year-round air-tempering system, believed to be the most elaborate ever installed in a residential building. Conditions anywhere in the White House can be checked from this panel and changes made if necessary.

New Membership Dues Set Up by NARDA

Members Also Share In Extended Assn. Privileges

CHICAGO—New membership dues brackets were set by the NARDA board of directors at its recent mid-year meeting, broadening the base of the association's membership.

Annual dues, to take effect immediately for new members and at the start of the fiscal year, Oct. 1, for present members, range from \$25 for all doing \$50,000 or less annual volume in appliance, radio, television, and service sales, to a maximum of \$100 for dealers doing \$500,001 or more annual volume.

Other membership brackets are: \$50,001 to \$100,000—\$36; \$100,001 to \$250,000—\$50; and \$250,001 to \$500,000—\$75.

Previously, \$36 dues applied to dealers whose annual volume was \$50,001 to \$75,000; \$50 to those in the \$75,001 to \$150,000 bracket; \$75 to \$150,001—\$250,000; \$100 to \$250,001—\$500,000; \$200 to \$500,001

—\$1,000,000; and \$300 to \$1,000,001 and over.

Since April marks the middle of the association's fiscal year, new members coming into NARDA at this time may enter for one-quarter of the annual dues, the board decided, and in October they may choose an annual, semi-annual, or quarterly basis of renewal.

The new dues structure provides that all members receive free copies of the NARDA Appliance Trade-In Blue Book, Industry Directory, Costs-of-Doing-Business Surveys, weekly issues of the association's newsletter, and a copy of the forthcoming Television Trade-In Blue Book.

Members are also entitled to privileges, such as group insurance participation and special rates on TV servicing training for themselves and their employees. Personal service permits members to call on their association for assistance on business problems.

Future Mart Dates Chosen

CHICAGO—Dates for the home-furnishings market through 1956 have been announced by the board of governors of the American Furniture Mart here.

The 1953-1955 dates are: Jan. 5 to 16 and June 15 to 25, 1953; Jan. 11 to 22 and June 14 to 24, 1954; and Jan. 10 to 21 and June 20 to 30, 1955. Jan. 9 to 20 and June 18 to 28 were chosen for 1956.

Record Temperatures Cause Record Cooling Applications

ALBANY, N. Y.—Recent record temperatures were accompanied by a rush of applications to the Albany Building Department for air conditioning permits.

Among the permits granted were: APW Products, Bridge St. and Erie Blvd., estimated cost, \$4,000; Matthew Bender Co., 255 Orange St., \$12,000; Polonaise Restaurant, 586 Broadway, \$2,000; J. Vogel, Inc., 11 Pruyn St., \$2,200; Dr. Joseph J. Russo, 130 S. Main Ave., \$1,600; and Fuller & O'Brien, 75 State St., \$1,500.

10-Ton Air Conditioning Unit Goes Into Fla. Town Bank

STUART, Fla.—A 10-ton air conditioning unit has been installed by Higbee Electric Co. in the Citizens Bank of Stuart, President D. S. Hudson announced. The Carrier equipment services the banking quarters only of the building and will utilize ducts previously installed in the ceiling of the room for heating purposes in the winter, Hudson explained.

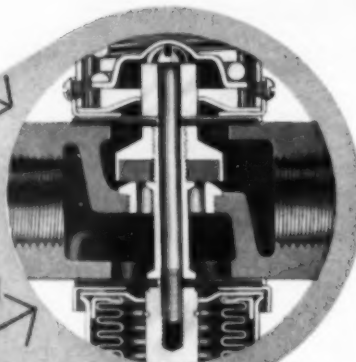


PENN WATER VALVES

Stay on the job

MUCH LONGER

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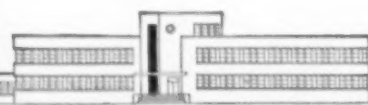
In the PENN Series 246 Water Valve... bellows, range spring and sliding parts never come in contact with water. Two nylon-reinforced synthetic rubber diaphragms (see cut-away view) effectively keep water out of these important "working parts".

Thus... the destructive effects of sedimentation and abrasive deposits which cause premature wear and water valve failure, never have a chance to attack the PENN valve. Result... more dependable operation and much longer life!

In addition, PENN's better design eliminates

water hammer... sticking of seats... need for lubrication. And the water valve is highly sensitive to changes in refrigerant head pressures to assure highest efficiency.

Built in sizes from 3/8" to 2 1/2" and in flanged or threaded styles, PENN Series 246 Water Valves are your best buy. Ask your wholesaler or write Penn Controls, Inc., Goshen, Indiana. Export Division: 13 E. 40th Street, New York 16, N. Y., U. S. A. In Canada: Penn Controls Limited, Toronto, Ontario.

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FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

CHILL CHEST

The Greatest VALUE in FOOD FREEZERS

THE FAMILY'S PREFERENCE EVERYWHERE



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Fundamentals Never Change!

SINCE 1946, our industry has been beset by pressures and challenges unknown to an industry that has enjoyed almost steady growth since its birth. And these pressures have all been crammed into a few short years.

Buyers markets, sellers markets . . . low inventories, high inventories . . . high volume sales, low volume sales . . . profitable sales periods, price-cutting, non-profitable periods.

We are proud of the record of Kelvinator in these years—proud of the faith and confidence that today gives new meaning to the Kelvinator franchise.

For fundamentals never change! "Integrity" is more than a word, just as "retail-mindedness" is more than a phrase. Both are based on deeds, and the courage to live up to principles.

Today of most striking value to retailers is Kelvinator's strict adherence, through the years, to its selective dealer policy. When others encouraged over-expansion of outlets, thereby

shrinking the average sales potential of each dealer, Kelvinator continued with a limited dealer organization. Thus Kelvinator, for its dealers, has held steadfastly to its policy of an adequate market for every dealer . . . markets adequate for a profitable appliance volume.

Yes, time and time again the principles of the Kelvinator Franchise have proved their worth under fire.

We at Kelvinator believe implicitly that Kelvinator's success is part and parcel of the retailer's success . . . that the future progress of Kelvinator is inseparably fused with the retailer's future. Thus, to the retailer, Kelvinator "retail-mindedness" is more than just a phrase . . . it is a business future. For Kelvinator policy, products, and programs will always be those in which successful retailing is the paramount consideration.

We will continue to live by this principle . . . for fundamentals never change!

THERE IS A BETTER FRANCHISE . . .

IT'S **Kelvinator**

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY
ELECTRIC REFRIGERATORS...RANGES...FREEZERS...WATER HEATERS...DEHUMIDIFIERS

KELVINATOR • DIVISION OF NASH-KELVINATOR CORPORATION • DETROIT 32, MICHIGAN

Newspaper Advertising Works Best For Room Coolers, Packaged Units

KNOXVILLE, Tenn.—Air conditioning beats the casket business all hollow, according to Ben A. Burnette, manager of Automatic Heating & Equipment Co. here.

"In January we hired a man who'd been selling caskets for 32 years, and he tells us that selling air conditioning is much easier than caskets," says Burnette. "The salesman explains that, 'after all, you can sell more than one to a customer.'"

This salesman is one of six employed by the firm, which distributes York refrigeration and air conditioning as well as several lines of heating and plumbing equipment. The firm is actually a subsidiary of the John F. Humphrey Co., a leading mechanical contractor in Knoxville.

Of the six salesmen, three concentrate on air conditioning and refrigeration, two on heating, and one on plumbing, Burnette explains. These men operate on a guaranteed salary plus a "volume credit" commission arrangement. The latter is designed to compensate the men for their volume and give them a little leeway on pricing merchandise.

A minimum markup is established for each product which a salesman can't go below, so the salesman works between that minimum and the "standard" markup, said Burnette. The better price a salesman can get means a larger commission.

As a York distributor, Automatic Heating covers the immediate Knoxville area itself, but in the smaller towns it depends on its dealer organization for sales.

"In a small town you have to have local people to do the selling job," Burnette declares. "The people won't buy from strangers. Besides, we couldn't compete outside of Knoxville on the labor cost."

To back up its salesmen the company depends to a considerable extent on advertising, which it tries to hold to a budget, particularly with its franchised lines.

Although it uses quite a bit of direct mail and some radio, the company has found that "newspaper advertising is the best for window units, packaged air conditioners, and heating equipment," Burnette says.

Inventory Curbs Dropped On Copper, Aluminum

WASHINGTON, D. C.—Manufacturers are authorized to ignore the inventory restrictions on copper and aluminum for the duration of the steel strike, the National Production Authority announced recently.

They cannot accept shipments for more of these metals than their authorized allotments, but they can exceed the 60-day supply of copper and 45-day supply of aluminum that had been the inventory limit.

After the strike, NPA warned, the larger stocks of these metals on hand will not be considered as a basis for granting requests for additional allotments of steel.

Atomic Irradiation--

(Concluded from Page 1, Column 2)

Up to now, he explained, experiments with atomic irradiation have been conducted on a very small scale, "but plans now call for tests on full-size standard cans this summer."

"Radiation, I'm sure, is here to stay. Within a year or possibly two, we will be using radiation to sterilize medicinals. Here, their cost is enough to make it profitable. Radiation of foods may follow soon after," declared Dr. Brownell.

Other problems besides that of quantity production at a practical cost remain to be solved, he admitted. On some products there is a change in flavor, and a change in color is sometimes encountered.

"I've tasted radiated bacon, however, and it tasted good. Milk that had been exposed to radiation didn't taste so good, though," he said.

Taking issue with Dr. Brownell's prediction that food preservation by radiation was in the near future, one expert in the food preservation field objected that "it's not practical now, although it may be 50 years from now. There are many, many problems and hundreds of men will have to study them for many years. Maybe our grandchildren will be able to use radiation for practical processes, but in my opinion it won't happen in our generation."

According to this individual, similar studies at another laboratory were limited to a maximum of 6 oz. of food and the exposure to radiation required 12 hours.

"They can't get enough samples yet even to run tests on the wholesomeness of food," he stated.



VICTOR 18-CU. FT. UPRIGHT freezer provides storage for 600 lbs. of frozen foods in compact space. Doors to each section can be used as sorting shelves.

Model Home Becomes Servel 'Showcase'

GREENWICH, Conn.—The decision of a local contractor to build a model home featuring Servel's gas-operated all-year home air conditioner was used by Servel officials as a springboard to push the home as a showcase for their product in surrounding Connecticut and New York.

The success of the promotion was pointed up by the sale of the model home and orders for 11 more homes with all-year air conditioners in a two-day period following public opening. The builder, Baldwin C. Hvas, said about 1,000 persons toured the home during the opening weekend even though the weather was rainy and threatening.

The home was planned not only to capitalize on year-round air conditioning but offering a full line of gas-operated major appliances to take advantage of economical natural gas which will be introduced by the Greenwich Gas Co. to its customers in early fall.

On display were Servel's deluxe 8.33-cu. ft. refrigerator, and 45-gal. copper-ball water heater, Western Holly's decentralized range and built-in oven, Bendix gas drier, Incinerator, and Kitchen-Maid cabinets.

The air conditioning unit selected for the home—the first of 66 that will form the largest group of air conditioned homes in the northeast section of the country—was Servel's model DC-96-G, having a cooling capacity of three tons of refrigeration and a heating capacity of 96,000 B.t.u.

Wallace Hoeling, eastern regional manager for Servel, explained that the all-year air conditioner is completely self-contained. Heating, humidifying, air cleaning, and circulation in cold months; cooling, dehumidifying, air cleaning, and circulation in warm months are all accomplished with one unit. The entire operation is controlled by flicking one or other of two switches set in Selectrol on the main floor.

Equipment and installation costs, Hoeling explained, raised the over-all price of the home only slightly more than it would have been if a conventional heating plant was installed.

The public opening was proclaimed by a special edition of the *Greenwich Time* which told the story of the new style home in detail. A series of radio announcements were spotted on Connecticut stations the week before the public opening.

Indiana Radio Service Firm Loses Decision In Tax Case

INDIANAPOLIS — The State Supreme Court recently rejected the contention of the operator of a local radio service firm that parts installed in repairing radio sets should be taxed at a "retailer's" rate of only 1/2%.

The 4-to-1 decision upheld rules of the Indiana Gross Income Tax Div. requiring a flat 1% tax on radio service contracts.

The court's majority opinion said that the repair contracts of the operator, Ferdinand Samper of J. & R. Radio Service Co., were "indivisible" since the repair of a radio would not be complete without both labor and parts. Samper disputed the tax rules in a test case.

Victor Freezer--

(Concluded from Page 1, Column 4) lated doors, measuring 11 1/4 x 28 x 3/4 in. thick. These doors can be used as shelves when loading or unloading.

Announcement of the new upright model follows shortly after the introduction of a new line of chest-type freezers marked by the inclusion of a complete set of convenience features.

Steel Strike--

(Concluded from Page 1, Column 5) make it difficult for room air conditioner manufacturers to re-open their production lines or step up volume on room coolers, inventories of which have been wiped out by the heat wave.

Real effect of the strike on production of durable goods may be felt in the early fall, because of delays in filling up supply lines.

Supermarket Installs Refrigerated Fixtures And Air Conditioning

LEXINGTON, Ky.—Newest of the supermarkets to be opened here is the Steiden market located on N. Broadway which has been fully equipped with open self-service equipment and air conditioned by Kentucky-Hill Refrigeration Co., distributor for the C. V. Hill and Frigidaire lines.

The market, which measures 75 by 125 ft., contains 58 ft. of self-serve meat cases, 38 ft. of open dairy cases, and 32 ft. of open frozen food cases in addition to walk-in coolers in the back room for holding meats, vegetables, dairy products, etc., according to J. T. Higgins, who heads the Kentucky-Hill firm.

Three 5-ton Frigidaire package units were installed to air condition the shopping area of the market, and in addition a separate system provides cooling for the meat-cutting room. The latter system consists of two Bush CJ85 coils connected to a 3-hp. Frigidaire condensing unit.

"In the first three days the new market was open, it broke the chain's records for meat sales, I was informed," Higgins said.

May Shipments of Gas Heating Units Up over '51

NEW YORK CITY—Shipments of gas-fired furnaces, boilers, and conversion burners during May increased sharply over the same month of 1951, members of the Gas Appliance Manufacturers Association reported recently.

Association officials said the rise was due to "a stimulated interest in expansion of existing houses, a healthy prospect for new home construction, and the promise of additional supplies of heretofore scarce materials."

Shipments of gas conversion burners jumped from 11,900 units during May last year to 18,900 this May, a gain of 58.8%. A total of 32,000 gas fired furnaces were shipped during May, 18.9% above last year. Gas fired boilers shipped totaled 3,706 units, up 12.1%.

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AIR CONDITIONING • REFRIGERATION • HEATING





HOME & FARM FREEZERS



6-Point Plan Aimed at Ending Cutthroat Pricing Practices In New Jersey

NEWARK, N. J.—A 6-point program designed to stop many cutthroat pricing practices among northern New Jersey appliance dealers was presented recently to the Greater New Jersey Appliance Dealers Association.

The points are:

1. Dealers are to use co-op money only in the manner that it was originally intended. No tie-in or cut-price merchandise alongside. No low-low price captions. It must be straight co-op copy, and no other products sold by the dealer can be advertised on the same page.
 2. Dealer is to mark all his products on his floor with suggested list prices as furnished by his distributor or factory. No cut prices on his floor or in his window.
 3. No dealer is to run any advertising in the newspaper reducing the price of any merchandise because of damages to the product. No names or models or cut-prices are to be mentioned, however "liberal trade-in" will be allowed.
 4. No dealer should transship or buy from a transshipper any franchised product without the approval of his distributor.
 5. Each distributor should have available for inspection by all his dealers his complete list of prices showing costs to the dealer of all the products he sells in all quantities.
 6. No dealer should keep his business open Sundays or legal holidays.
- According to President Jack Rosenberg, the plan was drawn up with the cooperation of five local distributors.

This Freezer-Food Plan Is 'The Berries'

ROCHESTER, N. Y.—The western New York strawberry harvest season provided the springboard for a promotion on home freezers at Peerless Appliance, operating three stores in Rochester.

With each freezer purchase, Peerless gave as a bonus four crates of strawberries. This amounted to 96 quart boxes, described as a year's supply. Peerless said the berries were fresh picked the morning of delivery. The store also included in the bonus gift the cartons in which to freeze the berries.

This was strictly a limited time offer because of the brevity of the strawberry picking season. Peerless said the offer was good so long as the berries were in season.

The promotion was launched with a large newspaper ad in which Peerless pointed out that the freezer could be purchased on the meter plan, for as little as 25 cents each day.

Flash Storm Snaps Power But Freezers Save Food

NEW YORK CITY—When a violent flash storm tore down power lines and knocked out practically all electric power in Nassau and Suffolk counties on Long Island early in June, not a single owner of a Manitowoc freezer suffered any food spoilage, according to a survey made by the firm's distributor.

Mann Refrigeration Supply Co., Manitowoc distributor in this territory, said that this was true even in areas that were without power for 25 hours. Even after 18 hours, the temperature inside every Manitowoc freezer offered a margin of safety, the company declared.

Within one week after the storm, many local dealers reported an upswing in the sale of Manitowoc freezers, coming, they said, from word-of-mouth recommendations of Long Islanders whose freezers gave full protection to the food inside through long hours without electric power.

Survey Finds Freezers In 12.2% of High Schools

NEW YORK CITY—Of 7,833 high schools replying to a survey conducted by the National Electrical Manufacturers Association, only 12.2% said they have a home or farm freezer installed in the school, the association reported recently.

The survey showed that 76.9% had a home economics department and that in 67.3% of the schools the students used frozen foods in meal preparation studies. In 65.5% of the schools, there was an organized plan for teaching food freezing.

Sales Team

Home Freezers, Pop-Up Toaster Help Sell One Another In Promotion Scheme

BILLINGS, Mont.—A home freezer may seem about the last "selling tool" which an appliance dealer may use to promote pop-up toasters—yet in a clever promotion developed by C. C. Musburger, appliance dealer here, home freezers have helped to double toaster sales.

Musburger is the head of the Appliance Mart and he has spent most of the last 10 years in initiating unusual, attention-getting "stunts" which call attention to his line of wares.

The application of the home freezer to toaster sales is simple. A home freezer, filled with food, is located in the electrical housewares department, right behind a display of leading toaster lines. Included in the foods frozen in the home freezer, are two loaves of sliced bread. When

Musburger gets an opportunity, either in approaching a customer, or answering questions about toasters, he points out that every model he carries in stock will toast a piece of frozen bread to a tasty, golden brown in 60 seconds flat.

Of course, the novelty of the idea gets a lot of attention from women visitors, and Musburger is always called upon to demonstrate. Therefore, he asks the housewife to step to the home freezer, and brings out two slices of frozen bread. In the process, of course, the housewife gets an opportunity to see the huge variety of food which the Appliance Mart keeps frozen at all times.

Popped into the toaster, the bread comes out in the form of a flavorful toast. Meanwhile, a coffeemaker which goes some 12 hours a day in

the store, is already with a cup of steaming coffee, and from a nearby refrigerator, comes butter and cream. The "coffee and toast service" registers favorably with all of the customers.

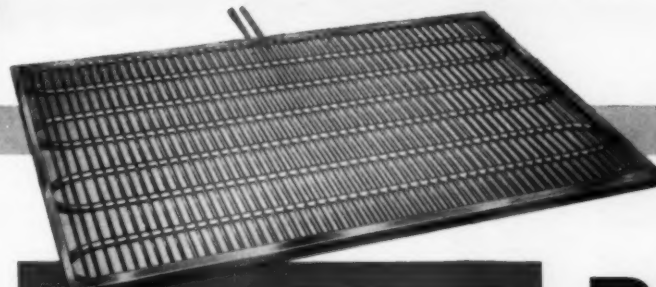
Since Musburger hit upon this clever plan, it has worked two ways. He can trace more than a dozen home freezer sales to the pop-up toaster demonstration, and his automatic toaster sales have more than doubled.

"Most women have never given any thought to freezing bread," he pointed out, "and even if they do not buy a toaster, they are always curious enough about the process to ask a lot of questions and to pick up much helpful information on freezer use in the process. Our results have been a better-entertained prospect, and a larger percentage of sales per visitor."

JUST ASK US!

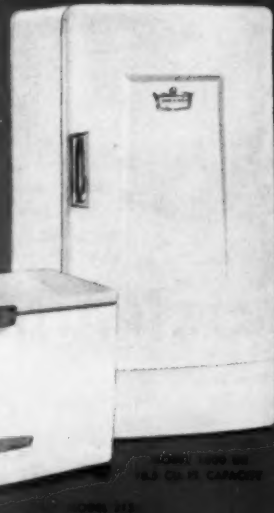
Turn to "What's New" Page for useful information on new products.

The Greatest Advance in Food Freezers *since the home freezer itself!*



5 NEW
MODELS

3 to 21 cu. ft.
capacity



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HOME FREEZER DIVISION

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MANUFACTURERS OF LOW TEMPERATURE
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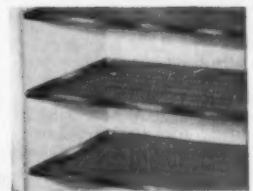
ONLY

PAK-A-WAY

HAS

kolrod
shelves*

ON UPRIGHT MODELS



Kolrod Shelves—Exclusive with Pak-A-Way—4 ways better. More efficient heat transfer for fast, economical freezing. Complete circulation for uniform temperature. Greater visibility for ease of selection. Lightening defrosting for convenience and safety.

Never before has one manufacturer presented such a complete line! Never before have so many wanted features been made available! Never before have deluxe models been sold at such truly competitive prices! The sensational new Pak-A-Way line has now brought "home appliance beauty" to the home freezer!

There's a model for every need—for every budget. And there's national advertising to tell about Pak-A-Way in such magazines as House Beautiful, Better Homes & Gardens, Household, House & Garden, Country Gentleman, Sunset, Successful Farming, Electricity on the Farm.

Remember, when you sell Pak-A-Way, you sell the finest.

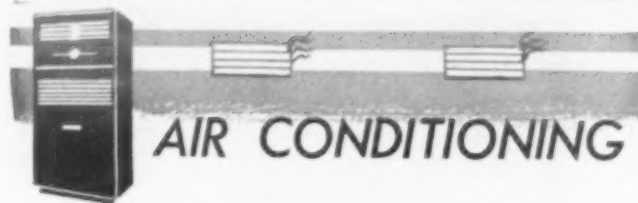
Models that Sell! Features that Sell! Prices that Sell!

Sparkling beauty that cannot be ignored!

*Patents applied for.

Residential Air Conditioning

Biggest Technical Problems Involve Proper Installation and Good Air Distribution, Indicate Speakers at ASRE Conference



ATLANTA — Although there are various types of equipment that can be used to achieve successful year-round air conditioning in a residence, proper application and good air distribution are prime requisites, regardless of the equipment used.

These are the obvious conclusions to be drawn from the conference on the subject staged by the American Society of Refrigerating Engineers during its 39th spring meeting at the Baltimore hotel here.

Under the direction of P. H. Moore of York Corp. and Justin Neuhoff of General Electric Co., chairman and vice chairman, respectively, of the conference, several speakers gave several views as well as specific details of equipment and application problems.

As scheduled speakers, E. A. Freund of Union Electric Co. of Missouri reviewed "Present and Future Markets" for all-year residential air conditioning. H. C. Pierce described Servel's all-gas package unit; G. K. Marshall, G-E's packaged heat pump; S. F. Shawhan, Carrier Corp.'s combination gas heating-electric cooling package; and R. W. Reid, York's packaged conditioner designed for use with existing forced warm air heating systems.

In addition, there was some comment from the floor.

There's Lots of Room for Selling Air Conditioning

"When I see the percentage of saturation that has been reached with the domestic refrigerator, the air conditioning industry can achieve any reasonable goal if it does a good enough selling job," Freund declared.

Speaking primarily from the utility's point of view, he commented that "if we could store electric energy in a tank, we wouldn't have to worry about service to our customers. Many of us believe year-round residential air conditioning will be a good load for the utility, but a big question is whether there'll be diversity of the loads. Sometimes, however, a minor change in design can bring great improvements in operating characteristics."

On this question of diversity of loads Freund recalled that the same fear had been expressed in the early days of the electric range, but experience has shown, he said, that every element on every range on a utility's lines is not turned on at exactly the same time. He indicated that this might prove to be the case with residential air conditioning.

Utilities Use Block Rate For Billing Customers

"Most utilities bill their residential customers on the block rate, with the first step covering lighting and the second step covering appliances. The third step is available for air conditioning."

Freund also pointed out that while a 10 kw. load running 500 hours a year or a 5 kw. load running 1,000 hours both equal an annual billing of 5,000 kwh., the first mentioned load costs the utility much more.

"How can we combine summer and winter air conditioning to make a year-round load that is attractive to the utility? If the utility has a summer load less than its winter load, then summer air conditioning is a desirable additional load because it doesn't require an additional investment by the utility. And when the summer load is larger, residential resistance heating may be the answer for winter," suggested Freund.

"The heat pump, however, may be the best answer because it requires only one-third as much power as resistance heaters. In the middle west, the heat pump will operate about

2,000 hours a year, or approximately 25% of the time. This," he said, "is a good load for the utility."

"Practically all utilities want additional load, and it appears that the heat pump offers better balance than any other combination. Use of resistance heating as an auxiliary to the heat pump during extremes of cold weather, however, is not desirable for the utility. This load has no diversity and is not used enough to interest utilities," warned Freund.

In discussing Servel's all-gas year-round conditioner (which employs an absorption system for summer cooling and a gas-fired boiler for heating, H. C. Pierce declared that "choice of a duct system and type of air distribution present the first problem in year-round residential air conditioning."

Box and extended plenums have proved least expensive and best, he also commented.

5 Requirements for Home Air Conditioning

At least five requirements must be met for successful operation of a residential system, Pierce indicated. These are:

1. Air supply should be variable to permit the different amounts needed for heating as compared with cooling.
 2. Fan must operate at higher than normal static pressure.
 3. Modulating capacity must be provided.
 4. Quiet operation.
 5. Simple control and selection of heating or cooling operation.
- "We recommend a duct system with a limit on resistance of .35 in. static pressure even though the fan on our unit can handle up to 1.0 in. resistance," Pierce said. "Air should be changed from six to eight times an hour to minimize the differences in temperature that may exist from room to room in the house."

More Air Needed In Summer

"It is also frequently necessary to supply more air in summer than in winter. In our unit we have a bypass damper below the cooling coil which can admit additional air during summer cooling operation. This damper is closed when heating. There is also an air inlet damper which can be modulated during the heating season."

As for changing from summer cooling to winter heating, the user merely has to throw a simple switch, Pierce explained.

Under the classification of the "all-electric" year-round conditioner, General Electric's air-to-air packaged heat pump was discussed by Marshall, who explained that G-E introduced its 3-hp. model last fall and a 5-hp. unit early this year.

"These units are 'refrigerant-switched' so that instead of changing the flow of air for heating or cooling, the flow of refrigerant is switched," Marshall said.

The two coils—one for outdoor air, the other for indoor air—serve either as condenser or evaporator, depending on whether the unit is heating or cooling the space, he explained.

Unit Divided In 3 Sections

Unit itself is divided into three sections: the outdoor air circuit, indoor air circuit, and the machine compartment. Each section is well insulated from the others, Marshall pointed out.

"General Electric is interested in both the residential market and the commercial field for its heat pump. For the latter application, the unit is equipped with an air distributor as on a package air conditioner."

Such an arrangement, of course,

is not needed on a residential unit because the heat pump package ties into the ductwork of the house.

"A simple switch permits changing from heating to cooling and vice versa, and we use standard components in the manufacture of these units."

"Their heating capacity is high, and on cooling the 3-hp. unit can deliver 33,000 B.t.u./hr.; the 5-hp. machine, 56,000 B.t.u./hr. Remember," Marshall emphasized, "these are air-cooled machines, not water-cooled, and the figures are based on a 95° F. outdoor temperature."

Select Heat Gain on Basis Of Outdoor Sensible Load

In applying the G-E heat pump, standard heat gain and loss calculations are recommended with the contractor being advised to select on the basis of the outdoor sensible load.

"Our experience is that too many safety factors are generally thrown into heating calculations," Marshall asserted. "Generally you get twice as much heating capacity as needed. Perhaps this is because extra heating capacity isn't so expensive as cooling capacity."

On the subject of ratio of heating capacity to cooling capacity, Marshall indicated that while plotting these against outdoor temperatures in the

north, three to four-and-a-half times as much heating as cooling capacity will be indicated on a chart, "we have found that the ratio is actually no greater than 1.5 to 1 at 0° F. in a well constructed house. Heat losses," he declared, "never reach the design figure at low outside temperatures, we have observed."

"In selecting the machine, generally the size that will handle the cooling will also handle the heating. However, we advise careful calculation of the heating load, too."

Marshall admitted that a deficiency in heating capacity is possible with the heat pump under some conditions, and so for that reason provision for supplementary heat is made. "T" connections for water supply are provided, "but most of our heat pumps in the field have resistance heaters where supplementary heat is required," he said.

"We don't exceed the summer kw. demand, however, when using resistance heating in the winter. G-E furnishes resistance heaters for its heat pumps, and we recommend they be installed so they can be turned on in 2 kw. steps."

He also advised utilities that "residential air conditioning is developing rapidly, so the heat pump should be compared with summer air conditioning systems, not winter heating."

Carrier's combination gas heating and electric cooling unit was discussed by Shawhan, who emphasized that "we at Carrier believe the success of year-round residential air conditioning depends on a good application."

"In large homes zoning may be required, and we generally recommend a separate system for each zone. In homes where parties are held, special consideration will be required. It is advisable to calculate the load under both party and normal conditions. You can then arrange for extra air outlets in the party area and during parties divert air from the bedrooms, say, to the party area," Shawhan said.

Location of Outlets Vital To Air Distribution

"The most important factor in air distribution is the location of outlets and return grilles. With low level outlets one has to be careful to avoid air stratification. High wall outlets, however, have been satisfactory for both cooling and heating."

"For heating with high wall outlets in a cold climate, though, it is advisable that (1) the house be insulated, (2) storm sash be on all windows, (3) all windows and doors

(Concluded on next page)



We turn the page to
"FREON"

... another product made available through DuPont research

AS DU PONT observes the 150th anniversary of the founding of the company in 1802 by Eleuthère Irénée du Pont de Nemours, it is interesting to note the vital part research has played in developing many products throughout the years.

FROM the humble beginning in a fieldstone mill along the banks of Brandywine Creek near Wilmington, Delaware, research—experimentation, they called it—has held a place of high concern in the development of Du Pont's "Better Things for Better Living... through

Chemistry." It was through such research, and the untiring efforts of chemists, physicists, toxicologists and others, that a long list of now familiar products came into being: cellophane, rayon, nylon, "Orlon", neoprene, "Freon", and there are many more.

EACH new product filled a definite existing need. Each offered refinements not until then found in any other product on the market. For example:

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Residential Air Cooling--

(Concluded from preceding page)
be weather-stripped, (4) the fan operate continuously, (5) returns be provided under each window, and (6) multiple outlets be installed in rooms with large window exposure," Shawhan suggested.

Where second floors are involved, he said, high wall or ceiling outlets are required to avoid over-cooling of the first floor area, with the second floor, of course, requiring more cooling than the first during summer.

"To keep noise at a sufficiently low level, air velocity from the outlets should be limited to a maximum of 500 f.p.m. with 60% free area," he advised. "The noise level in a residence is much lower than in most commercial applications. In so-called 'noisy' residences reading as low as 25 to 35 decibels have been taken.

"Thus, careful selection of equipment is essential to keep the noise level low. Duct velocities shouldn't exceed 800 f.p.m. and the velocity through return air grilles should be no greater than 400 f.p.m. with 60% free area.

"Return air must be brought back from each room of the residence, but this doesn't necessarily mean there must be a return grille in each room," Shawhan said. "On the second floor, for example, most of the return air comes from downstairs, so the return grilles for this area are usually located at the base of the stairs or under the stair treads."

Watch for Low Voltage

He also reminded the group that most residential prospects for year-round air conditioning have only

single phase electrical service into their homes, so the contractor must be careful about low voltage.

"Another important problem is that of condensing the refrigerant for summer cooling," he added. "This can be done by (1) city water, (2) a cooling tower, (3) an evaporative condenser, or (4) an air-cooled condenser. Using an evaporative condenser would involve breaking into the hermetic systems of the package unit, thus destroying the advantages obtained through factory sealing of the system.

"City water is generally too expensive, so most residential air conditioning systems are being installed with cooling towers," Shawhan declared. "These can be installed to blend in nicely with landscaping."

In winding up his presentation Shawhan warned that "a few failures in residential installations can hurt the whole industry, so I urge that standards be kept high."

A different approach to year-round residential systems was offered by Reid of York, who discussed application of package conditioners to existing forced air heating plants.

"The first problem," he said, "is estimating the load, but this can be done easily by using a simplified form. Room-by-room analysis in small homes is unnecessary, but over-estimating the load to play safe is not too good because a cooling B.t.u. costs 10 times as much as a heating B.t.u."

In other words, a generous factor of safety can be provided in a heating plant at little extra cost to the

consumer but not so with a cooling system, he indicated.

"When selecting a unit, it must be remembered that in residential jobs the load is chiefly external, and because there is a time lag due to the building structure, cooling equipment can be safely selected for 20% less than the maximum design load," he advised. "Select the unit on the basis of sensible capacity and merely allow one air change per hour to handle the latent load."

An important problem encountered when applying a conditioner to an existing heating system is that of determining the air quantity being delivered by the system's fan, Reid said.

"Cooling units are usually figured on the basis of supplying 300 to 400 f.p.m. per ton of refrigeration. So for a 1-ton system you'll probably need a 1/2-hp. fan motor; for a 7 1/2-ton job, a 3/4-hp. motor on the fan."

Some help in determining air delivery can also be obtained sometimes from the nameplate of the heating unit, he added.

Rust Problem Not Aggravated

"As for the location of the cooling unit, it's usually more convenient to put it in the return air. The upstream installation, however, brings up the question of condensation, and thus damage, to the heat exchanger of the furnace, but we have not found that the rusting is accelerated by having the cooling coil upstream.

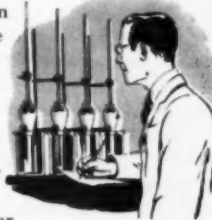
"The air distribution system is just as important as the equipment," Reid also declared. "The ducts must be tight for summer cooling so it may be necessary to seal these joints. The return system especially must be tightly sealed."

quantities . . . an amazingly intricate and highly technical procedure developed by Du Pont. The refrigerants were most welcome. And they proved an enormous impetus to the entire refrigeration industry.

MANUFACTURERS of equipment were much encouraged. Now, at long last, they could do some of the things they had planned. Improvements came rapidly. Small and large air conditioning and refrigeration units were designed to meet ever-increasing commercial, industrial and household needs. The new machines were more compact, safer, quieter, more economical to buy, install, operate and maintain. The sensational dryness of "Freon" refrigerants (less than 10 parts of moisture in a million parts of "Freon-12") reduced risk of freezing capillary tubes and other parts of delicate mechanisms. Equipment became steadily more efficient . . . more dependable.

TODAY, countless air conditioning and refrigeration systems of every size and type are operated with "Freon" refrigerants. There is scarcely a business or an industry which does not benefit, in one way or another, from the fruits of this modern engineering achievement. Indeed, air conditioning and refrigeration occupy so important a part in the activities of everyday life that they are now often taken for granted.

BUT RESEARCH is a never-ending effort. Progress demands it. What is new today may become obsolete tomorrow, next week, next year. That is why research has become an indispensable, integral part of Du Pont's continuing program of product improvement. It is why "Freon" refrigerants are now unhesitatingly approved by those associated with today's steadily expanding industry of air conditioning and refrigeration. E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



almost every residential neighborhood. So were the transient vendors of meats and the hucksters of fruits and vegetables. But during this second decade of the century mechanical refrigeration appeared, and a change began to take place in the country's way of life.



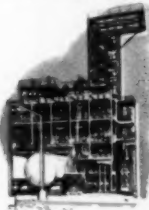
NEW REFRIGERATORS—though crude—won immediate popularity. Air conditioning—then scarcely more than a novel idea—also received an enthusiastic welcome, and the future looked bright indeed for these new industrial twins: air conditioning and refrigeration.

Refrigerants then available, however, left much to be desired. Manufacturers knew this. They knew, as well, that improved equipment was urgently needed. They pleaded: "Give us a safer refrigerant . . . one that is nonflammable, nonexplosive . . . of low order toxicity, low in moisture content, chemically pure and thoroughly dependable. Then we will design and build better machines."

It was a big order . . . a challenge to research. But the job was promptly undertaken, and in 1928, Dr. Thomas Midgley, Jr., with a corps of learned chemists, began intensive research toward the development of the better refrigerant.

YEARS of experimentation followed. Hundreds of laboratory tests were conducted. In due course, they led to discovery of the effectiveness of two compounds: monofluorodichloromethane ("Freon-11"), and dichlorodifluoromethane ("Freon-12"). These were halogenated hydrocarbons having one or more fluorine atoms, and it was determined that they possessed all the desired properties required to produce greatly improved refrigerants.

By 1931, "Freon" safe refrigerants were being made in commercial



150th Anniversary

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



"FREON" SAFE REFRIGERANTS

"Freon" is Du Pont's registered trade-mark for its fluorinated hydrocarbon refrigerants.

"Ducts passing through areas of heat gain must be insulated, although it probably won't be necessary to insulate ducts in the basement unless there is a problem of condensation."

Outlet and return grilles should be studied to determine whether they'll give satisfactory performance during summer cooling, Reid also suggested.

Summer System Controls Can Be Simple

Controls for the summer system need not be complicated, he indicated, and can consist of a double-pole, single-throw switch to cut in the cooling system and a thermostat in the return air duct.

The latter is recommended instead of a calibrated wall thermostat "since comfort is the aim of the system, not the holding of an exact temperature," Reid said. With a wall thermostat users might expect a definite temperature to be held closely even though a higher temperature would provide adequate comfort.

When the discussion period was opened following the formal presentation of the papers, A. B. Newton of Acme Industries, Inc. gave a few details of the Acme Flow-Cold self-contained liquid chiller, prefacing his remarks with the statement:

"I think the industry generally can benefit by selling more than just 'comfort' in the residential market. Better health and perhaps even a different way of life can be had with air conditioning."

Chiller Is Versatile

Regarding the chiller, "we feel it can be successfully applied to many existing installations as well as new homes," Newton said, "and to warm air systems, steam or hot water. And the same piece of equipment can be used as a heat pump."

The view that packaged units are not necessarily the answer was implied by John Bray, Tampa, Fla., consulting engineer, who said "we should approach residential air conditioning with good engineering, not just the idea of sticking some equipment in the house and letting it go."

"The principal requirements for residential air conditioning are low initial cost, low operating and maintenance cost, and accessibility for service. The major complaint found with most residential air conditioning," Bray asserted, "is noise. My answer to these problems is the

tailor-made job."

Bray then described some installations he had handled, including one in his own home that had been "built for air conditioning." The structure, he said, was almost completely air tight (so much so that provision for introducing outside air had to be added later), and had aluminum foil insulation in the walls and ceiling.

"The load was calculated as 44,000 B.t.u., but we installed equipment that had a capacity of only 29,000 B.t.u. and the results have been satisfactory."

On the subject of adding air conditioning to existing heating systems, one contractor commented at the conference that he had recently run into objections from local officials over systems where heated air passes over cooling coils in winter, and also cool air going through the combustion chamber and creating a potential condensation problem in summer.

"There are localities that have such restrictions," Reid admitted, "but the refrigerant charge in hermetic systems is limited so that all the liquid is evaporated at 80° F., and even at 160° F. the pressure of the gas in the system is not excessive."

Pros and Cons of Condensation

Objections to placing the cooling units in the return air duct, however, were cited by Ralph Gonzales of Airtemp Div., Chrysler Corp.

"In some regions of the south this has led to quick rusting of furnaces in one or two years," he declared. "In some northern localities some installations have been successful on this score for four or five years."

"Our data is not conclusive," Reid replied, but he also made the point that "York is working with one of the largest manufacturers of heating equipment who isn't worried about this problem of condensation."

Freund commented that "I've operated such an air conditioning system in my home for 17 years, and it's very simple to eliminate the problem of condensation in the combustion chamber merely by stopping the flow of air through it during the summer cooling season."

To this statement another engineer replied, "it may be very well to block off the heating flue in your own home, Mr. Freund, but the average homeowner may not want to bother, and, further, he might forget to remove the baffle when the heating season begins."

ROTARY SEAL Replacement Units



AVAILABLE FOR
MORE THAN
900

COMPRESSOR MODELS

The original precision-built replacements for Commercial, Semi-Commercial, Air Conditioning and Home Refrigerator Compressors . . . Proven by outstanding performance for over 20 years! Units are available for all standard makes.

Easy to Install
Simple in Construction
Efficient in Operation
Economical

AT ALL LEADING JOBBERS



"Seal with

Certainty!"

2020 NORTH LARRABEE STREET
CHICAGO 14, ILLINOIS, U.S.A.
CANADIAN AGENT: 2035 ADDINGTON AVENUE
MONTREAL 28, QUEBEC, CANADA

Theleen, McBride, Warren Take New Posts In G-E Marketing Plans at Appliance Park

LOUISVILLE, Ky.—Regrouping of marketing activities of General Electric's major appliance division was announced recently.

The changes are in line with planning for the concentration of all the division's research, engineering, manufacturing, and marketing activities at Louisville where a multi-million dollar Appliance Park is under construction.

Louis H. Miller, manager of the marketing department, said that operations would be grouped in three sections—special accounts, sales planning, and distribution—and that the position of manager of sales would be discontinued.

Charles W. Theleen, manager of sales, will become manager of special accounts.



C. W. Theleen



John F. McBride

John F. McBride, manager of marketing for the range and water heater department, will be manager of sales planning.

Herbert A. Warren

Herbert A. Warren, district manager of appliance sales in the south-eastern district with headquarters at Atlanta, Ga., will be manager of distribution.

T. D. Eberhardt will continue as assistant to the manager of marketing and accounting, and Charles J. Enderle will continue as assistant to the manager of marketing.

All will have headquarters at Louisville.

Miller emphasized that the regrouping was intended to place greater emphasis on planning functions which would enable the division to maintain its position in a highly competitive industry—an industry that is expected to reach \$4½ billion in retail sales by 1960 as compared with \$3 billion last year.

Division of responsibility for the three specific areas of marketing, Miller added, will permit top executives to exercise more direct personal control over the functions for which they are responsible.

At the same time, he said, he and the three sectional managers will be able to coordinate over-all planning and minimize duplication of effort.

Theleen joined the General Electric



H. A. Warren

organization in 1933 as a utility contact man with the Electric Vacuum Cleaner Co., a G-E affiliate. Prior to the separation of General Electric's Appliance and Merchandise Department into the major and small appliance divisions in 1951, he had been manager of sales for the department. Previously he had been department manager for electric sinks and cabinets.

McBride's experience with General Electric goes back to 1929 when he joined the publicity section of the International General Electric Co. at Schenectady. He first became engaged in range merchandising in 1937.

In December of that year he was appointed advertising supervisor for range and water heaters and in 1939 was named range and water heater representative in the west central district. He was named sales manager for ranges in 1945 and in May of last year was appointed manager of marketing for the range and water heater department.

Warren joined General Electric's Atlanta office staff in 1935 as a specialty appliance sales representative. Subsequently he became a sales specialist on domestic refrigerators, air conditioning, and commercial refrigeration. In 1945 he was named manager of appliance sales for the new central district with headquarters at Kansas City. He returned to Atlanta as southeastern district sales manager on Jan. 1, 1950.

Appointments of a new manager of marketing for the range and water heater department and a southeastern district manager of sales to replace McBride and Warren have not yet been announced.



(Concluded from Page 1, Column 1)

Reginald Boyles, Refrigeration Supply Co., Dallas, Texas.

Jacqueline Morris, District Home Economist, International Harvester Co., Madison, Wis.

Howard P. Michener, Jr., Export Sales, New York City.

C. F. Zeckel, Aluminum Goods Mfg., Manitowoc, Wis.

Will Phillips, State College, Miss.

Garrett Bartholomew, Lifesay Distributing Co., Flint, Mich.

Jack Bentley, Morley Brothers, Detroit, Mich.

K. B. Hughes, Camden, Ark.

Kenneth Gelivix, Shell Beach, Calif.

Arvin Schmid, W. Palm Beach, Fla.

Charles S. Cole, International Harvester Co., Loudonville, N. Y.

Mrs. J. W. Benton, Monticello Hardware Co., Monticello, Ga.

Hal Feldman, Beach Refrigerator Co., Rockaway Beach, N. Y.

A. Stapler, Philco Corp., Philadelphia, Pa.

E. A. Preisel, Brooklyn, N. Y.

Everett E. Benson, Seeger Co., St. Paul, Minn.

Since these gentlemen came so close to winning we are sending them copies of our joke book, "You'll Love This One," as a consolation prize.

How To Figure It

As an example of the algebra involved in the case, here is how one contestant worked it out.

Aluminum Co. of America
Dear "Dope":

Don't suppose a subscriber 'way out in Pittsburgh has much chance of being first, but we are trying. Bob's present age is 18.

Solution:
B = Bob's age now
J = John's age x years ago
When John was J years old, Bob was 12
 $B = 12 + x$
 $J = 24 - x$ also $J = B$

$B = 12 + x$
 $J = 24 - x$

$2B = 36$ or Bob's present age = 18.
Very truly yours,
E. W. MASON

Another Riddle

Subsequent mails brought more answers (including many wrong ones).

From International Falls, Minn., for example, came not only the correct solution but another riddle. Here 'tis:

Dear Mr. Taubeneck:

Your puzzle contest Riddle of "In-

side Dope" is good. I have always liked that type. I believe that Bob would be 18 years old.

Another one that I have liked is a man visiting a prison and stopped to talk to a prisoner. The guard asked him if they were acquainted. The man answered, "Brothers and sisters I have none, but this man's father is my father's son." What relation are they?

I always read your column first for it sort of relaxes a person and I can get more out of the entire paper. Oh, the answer to the above, "His own son."

Sincerely,
W. R. BYMAN
Byman's Refrig. Service

Next Contest

Inasmuch as this contest turned out to be popular, herewith is another riddle.

First answers received will get copies of Dope's latest book, "How to Be Happy Despite the Politicians."

Baseball fans (and who isn't?) should be especially interested. Chew on this:

"Three women were seated in a box at Yankee Stadium. On the fourth seat was an empty bottle.

"What inning is it, and what's happening on the diamond?"

Quotable Quotes

"It should be said again: The world needs not so much to be informed as to be reminded.—Management Briefs.

He who teaches his child to live on small means leaves him a fortune—ELSIE LINCOLN BENEDICT, *Ladies' Home Journal*.

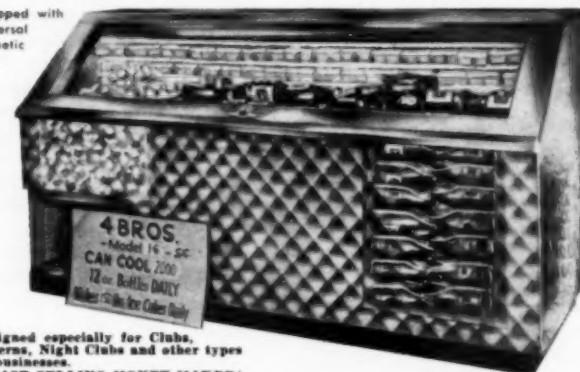
More Than Expected

Ask your friends how many corporations have more than 100,000 stockholders.

The following list, giving the number of preferred and common stockholders as shown by latest reports, may confound them.

American Telephone & Telegraph	1,092,000
Anaconda Copper	119,000
Cities Service	203,000
Commonwealth Edison	126,000
Consolidated Edison	160,000
E. I. du Pont de Nemours	138,000
General Electric	253,000
General Motors	482,000
Pacific Gas & Electric	188,000
Packard Motor Car	105,000
Pennsylvania R. R.	180,000
Radio Corp of America	187,000
Sinclair Oil	101,000
Socony-Vacuum Oil	158,000
Standard Oil of California	165,000
Standard Oil (Ind.)	117,000
Standard Oil (N. J.)	254,000
Texas Co.	114,000
Union Carbide & Carbon	102,000
U. S. Steel	270,000
Westinghouse	103,000

Equipped with Universal Marmite Unit.



Designed especially for Clubs, Taverns, Night Clubs and other types of businesses.

A FAST SELLING MONEY MAKER!

The Originators of the COMBINATION ICE CUBE MAKER & BEVERAGE COOLER

Gleaming Stainless Steel with Sliding Doors

Model 1-6, 6 Ft. Self-Contained unit that makes 150 lbs. of ice cubes and dry cools 2000 12-Oz. bottles daily.

REMOTE TYPE MODEL 1-6 dry cools 2300 12 oz. bottles daily. Provided with adjustable separators for 10 different brands of beverages.

POLYETHYLENE ROTO TRAYS Just twist and you have as many ice cubes as you need at any time.

3-INCH INSULATION WATERPROOF FRONT

STAINLESS STEEL FINISH FRONT 4-5-6-7-8 FT. SIZES, 27" W., 39" H.

For Full Information and Prices Write to:

4-BROTHERS Factory and Showroom

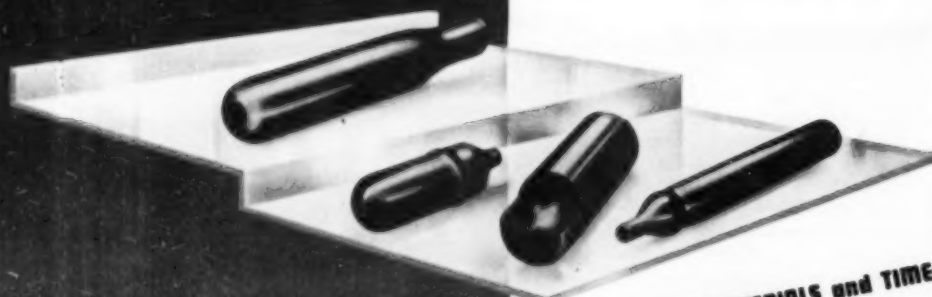
1427-31 So. 8th Street

REFRIGERATION MANUFACTURING CO. Philadelphia 47, Pa.

Exclusive franchise in your Territory available to dealers and distributors. Please write or call.

TUBULAR PARTS with FORMED ENDS

FOURTH OF A SERIES OF ADVERTISEMENTS THAT TELL ABOUT PRODUCTS THAT MEAN MUCH TO THE REFRIGERATION ENGINEER



PRODUCED FASTER—GENERALLY REDUCE ASSEMBLY UNITS—CONSERVE MATERIALS and TIME

If you require a component that is tubular with ends specially shaped, consider the advantages of producing it from a length of Wolverine nonferrous tube formed by our exclusive Spun End Process. This process can be used to produce a wide variety of end forms—round, tapered, or related forms, partially or completely closed.

In most cases, this process can bring you economies of time and material, for a slight change in design can affect reduction of parts required. This saves assembly time as well as the cost of the parts that now can be discarded.

To help you better visualize the many ramifications of this unique process, send for a copy of our new brochure, "Spun End Tube". Its pages may open your eyes to the new possibilities this "different" form of production affords.

*A patented process Re. 22445

WOLVERINE TUBE DIVISION

Columet & Meco Consolidated Copper Company

Manufacturers of seamless, nonferrous tubing

1413 Central Ave. • Detroit 9, Mich.

Wolverine Tube and the Wolverine Spun End Process available in Canada through the United Tube Company, London, Ontario.

Wolverine Mill Depots:

DETROIT, MICH. • DECATUR, ALA. • HOUSTON, TEXAS • LOS ANGELES, CALIF. • LONG ISLAND CITY, N. Y. • PHILADELPHIA, PA. • PROVIDENCE, R. I. • ST. LOUIS, MO.

Export Department, 15 E. 40th St., New York 16, N. Y.

Demand for Refrigerated Dairy Equipment Increases as Milk Consumption Shows Rise

LINCOLN, Neb.—The demand for refrigerated equipment in the dairy industry, all the way from mechanical milk coolers on the farm to self-service display fixtures in retail stores, will continue to grow indefinitely, according to Fred Schultz, dairy marketing specialist at the University of Nebraska.

As proof of his statement, he pointed to the fact that 8,000 new customers are added to the milk market each day, and the annual per capita consumption of fluid milk in this country has increased from 323 lbs. in 1916 to 395 lbs. last year.

Schultz pointed out that mechanical refrigeration is playing a vital role in the expansion of the dairy industry. New research gives even greater emphasis to the value of milk as a main item in the diet of the nutrition-conscious America, he asserted, and milk in this country is the best in the world. Our system of low-cost distribution, sanitation, pasteurization, and supply, made possible largely through new developments in refrigeration, creates a standard which dairymen throughout the world come here to study.

Judging from the potential supply and demand situation of dairy products, the American dairyman seems assured of a strong demand for milk for a long time, Schultz continued. The strong price paid for milk has encouraged more interest in milk production, especially where Grade A is concerned.

Many Nebraska farmers are in the process of converting their farms to meet Grade A requirements. A 10% increase to the present Grade A producers is expected by next fall. These added producers will give some relief to the expected fall shortage of milk, but many more producers are needed.

The average conversion cost in Nebraska is about \$1,500, he stated, including such facilities as loafing shed, milk parlor, milk house, and mechanical cooling equipment. The additional returns of Grade A over Grade C price will usually pay for the conversion cost the first year. This applies to herds of 12 to 15 cows.

In the newer setups, he pointed out, the herdsman handles the entire milking operation in a very small space. Within an area of three or four steps, he feeds the cows, opens

and closes the doors and operates the milking machines. After each milking, all equipment is completely dismantled, thoroughly washed and cleaned, and milk put immediately into mechanically refrigerated milk coolers, where it is later picked up by the trucker and taken to the processing plant.

Schultz cited Merle Lipe, farmer near Waverly, as typical for a Grade A setup in eastern Nebraska. He is one of the newer Grade A producers. His old horse barn was converted into a loafing shed. He milks in four-stall, walk-through type of milk parlors. The milk is cooled and all the equipment washed in the milk room adjacent to the parlor. He has found it easy to operate two milking machines and his average milking time per cow is four to five minutes.

Lipe's setup provides for pumping the milk directly to the adjacent milk room and into milk cans. The mechanically refrigerated milk cooler lowers the temperature to about 40° in a short time.

Milk trucking is a highly specialized operation, Schultz further pointed out. Each truck is equipped with an enclosed body, well insulated to prevent the milk warming up in hot weather and to keep out dust. More motor vehicles are used in the distribution of milk than any other commodity, he declared. There are approximately 190,000 trucks used in the delivering of milk from farms to plants and from plants to consumers.

\$25,000 Fire Guts Shop Of Neb. Appliance Outlet

NORFOLK, Neb.—Fire damage estimated at \$25,000 was done at the Norfolk Maytag Co. here recently. G. E. McFarland, who is co-owner with Mrs. Lucretia Harsch, said the fire was started by a bolt of lightning and was partially covered by insurance.

The blaze was confined to a shop in the rear of the store where more than \$8,000 worth of appliance parts were stored, according to McFarland, who noted that the shop was gutted by flames. Smoke and water damage was heavy throughout the three-story brick building, and the company had appliances stored on all three floors.

Chicago RACCA Plans Golf Tourney July 31

CHICAGO—The Refrigeration and Air Conditioning Contractors Association of Chicago plans to hold its fifth annual golf tournament and dinner on July 31 at the Itasca Country Club in Itasca, Ill.

The golf committee expects more than 200 guests representing contractors, wholesalers, manufacturers and their representatives, union, and city officials to attend.

Golf, at \$7 per person, will start at 10 a.m. and run through 7 p.m. A steak dinner will commence at 7 p.m. Tickets for the dinner sell at \$5 each.

G. F. Restagno is chairman of the golf committee. Other members are E. A. McLean and G. J. McArdle.



Demonstrator Helps Explain Dehumidifier

EYE-CATCHER is this new demonstrator unit for dealer use—a Kelvinator dehumidifier with transparent plastic top and sides. Parts inside are painted in four colors to help the salesman explain how the dehumidifier works to remove unwanted moisture from room air. Standard metal cover is available to convert the demonstrator into a conventional unit for sale, when no longer needed for floor display. Casters shown are accessories.

OPS Allows Resellers To Follow Approved Published Price Lists

WASHINGTON, D. C.—The Office of Price Stabilization recently authorized resellers of machinery and related manufactured goods to use the manufacturers' published price lists which have been approved by OPS even though discounts or margins established by these price lists

are not identical to those in effect on June 24, 1950.

Manufacturers may apply to OPS for approval of revised price lists, and, generally speaking, these price lists will be approved if it is shown that resellers' average margins will be approximately the same as before the issuance of the revised price list.

These applications are to be filed with the Industrial Materials and Manufactured Goods Div., OPS, Washington 25. Such revised list prices and discounts may not be used or put into effect until written approval has been given.

Shellmar Products Offers Supermarkets Complete Produce Pre-Packaging Kit

MT. VERNON, Ohio—A kit designed to provide supermarkets and grocery stores with everything needed to establish an efficient pre-packaged produce department is being offered by Shellmar Products Corp. in co-operation with Goodyear Tire & Rubber Co.

Called "Bin Service Pak," the kit consists of six sizes of special plio-film bags and closures and a drop-front storage cabinet. The latter has slots for marking pencils, stamp pads, and price markers. An index on the drop front shows the amounts of fruits and vegetables that can be pre-packaged in each size bag.

Shellmar officials said the 3,650 bags in each Pak will meet the average store's needs for approximately one month.

Noting that there are about 14,200 super and self-serve markets in the country, the officials said potential annual demand in meat departments amounts to 90 million lbs. of packaging film, according to a recent survey. Only 24 million lbs. of all types of packaging are being used now.

Produce departments should add 94,400,000 lbs. more annually, of which only 10 million is currently available to converters, the officials declared.

Wampler, Mitchell In AMA Posts

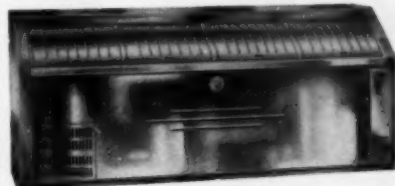
NEW YORK CITY—Cloud Wampler, president of Carrier Corp., was recently elected a director of the American Management Association for a three-year term.

At the same time, Don G. Mitchell, president of Sylvania Electric Products, Inc., was elected chairman of the association's executive committee.

SUPREME BOTTLE COOLERS



SELF-CONTAINED BOTTLE COOLERS



CLUBSTERS



STAINLESS STEEL DRAINBOARDS



BLUEBIRD BOTTLE COOLERS



THE LEADING COMPLETE LINE OF COMMERCIAL REFRIGERATION EQUIPMENT UNDER ONE LABEL!

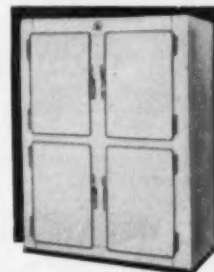
NEW - 5 YEAR WARRANTY (OPTIONAL)

LA CROSSE leads again with a NEW 5 Year OPTIONAL Warranty Plan on sealed condensing units installed in LA CROSSE equipment at the factory. You now are able to offer the 5 year warranty to customers who want the additional protection at small cost. The optional 5 year warranty provides you with an additional sales tool when selling LA CROSSE products. WRITE FACTORY FOR DETAILS.

DIRECT DRAWS



REACH-INS



BOTTLE COOLERS WITH UTILITY HOUSINGS



many other models also immediately available

DEALERS WRITE TODAY

Factory and Gen'l Offices: 2801 Losey Blvd. S. La Crosse, Wis.

Export Office: 80 Broad St., New York City. Cable Address: Eximport

LA CROSSE COOLER CO.



CONTRAST between a broken down refrigerator and a new one was the feature of this traffic-stopping window display, which was set up at the beginning of the hot weather.

Display of Broken-Down Refrigerators Stops Traffic, Boost Sales

ORCHARD PARK, N. Y.—W. G. Arthur Co., hardware and appliance store here, stopped considerable street traffic and gave impetus to its refrigerator business with an unusual window display built around the theme of a broken-down refrigerator.

The display was set up at the beginning of the hot weather season and showed an old model refrigerator, tilted at an angle, as though hobbling along on crutches. Two crutches were propped up on either side of the box. Accompanying card copy read, "Last Leg" and "Repair Bills."

In the foreground of the window was a simulated grave, with a headstone which read: "Here Lies R. E. Refrigerator." A banner running across the top of the window said in large letters: "Yours? Too Bad! Look!"

An arrow from this banner pointed to an adjoining display window in which was shown a new refrigerator with all its modern facilities and advantages.

Admiral Purchasers Who Put It on Line In July Get 3 Hams

CHICAGO—As part of its heavy political convention promotion, Admiral Corp. is making available to its distributors and dealers a supply of Armour Star canned hams, three of which will be given free to consumers purchasing an 11-cu. ft. conventional Admiral refrigerator during the month of July.

According to Seymour Mintz, advertising director, when a consumer buys the specified Admiral refrigerator, the dealer will fill out a blank with the name of the customer's food market, and send it to Chicago.

Admiral then will advise Armour & Co. which will send the refrigerator purchaser a letter authorizing the food store to supply the hams without charge.

Armour and Admiral will pay the meat market the designated price for the hams, Mintz pointed out. No charges will be made to Admiral distributors or dealers.

First public announcement of this offer will be made Sunday, July 6, on Admiral's Bob Trout World News radio program over CBS. The offer also will be promoted during the political convention telecasts and broadcasts sponsored by Admiral over American Broadcasting Co.

In another convention special designed to increase store traffic, dealers will present free of charge a set of four green chip-proof Anchor-Hocking glasses to all persons entering the store and asking to see a demonstration of an Admiral television set or refrigerator.

Hotpoint Makes Insignia Signs Available to Dealers

CHICAGO—A new display sign program designed to increase local dealer identification has been announced by Hotpoint Inc. Under the plan new indoor and outdoor store signs, lighted counter and appliance displays, and electric wall clocks bearing the Hotpoint insignia will be available to dealers.

William E. Macke, merchandising manager for the company, said that the new sign program will help dealers to take advantage of Hotpoint's extensive national consumer advertising program and exploit its impact at the local level, he said.

Lighted outdoor signs are triple embossed plexiglass and come with or without dealer name panels.

Westinghouse Dealers Offered 'Package Deal' On Dishwasher Display

MANSFIELD, Ohio—A special "package deal" that will give Westinghouse dealers a 48-in. electric sink as a demonstrator at a special price was announced recently as part of the Westinghouse Band Wagon promotion.

W. Ross Arbuckle, acting manager of the water heater and kitchen utilities department, said acceptance of the plan by dealers must include an agreement to install the equipment on the sales floor.

The "package deal" includes a 48-in. electric sink, dishwasher display package, two sets of demonstration dishes and glasses, and one set of hose fittings for installation.

The new dishwasher package is being made available to dealers to help them take advantage of the intensive sales drive in July when Westinghouse sponsors the CBS television and radio coverage of the national political conventions, as well as the 13-week Lincoln-Douglas type debates that will follow and election night coverage on Nov. 4.



'Rolling Showroom' Which Overcomes Most Faults of This Type of Selling Pays Off

2 Appliance Firms Share \$9,000 Twin-Coach Bus

PHILADELPHIA—Investing sufficient funds in the construction of a "rolling showroom" to do away with the disadvantages of this form of selling, has had excellent results for Michael's, major appliance dealership here.

The store has realized an increase of 20% to 25% in appliance and television volume in only a few months, all directly traceable to the use of the rolling showroom, according to Michael McDonough, co-owner of the firm.

"This mobile showroom is the best method my firm has ever developed to compete with chain stores, low price outlets, and similar competition," he said.

ONE SIDE HAS DISPLAY WINDOWS

The rolling showroom, instead of the customary house trailer, or converted van truck, is a twin-coach bus, which cost the firm \$9,000 for purchase and remodeling. One side

has been converted to four large "display windows" approximately the size of a standard store window, behind which are shown television sets, water heaters, radios, refrigerators, small appliances, and automatic laundry equipment.

FLUORESCENT LIGHTING FOR NIGHT APPEAL

The exterior of the bus has been done in flat white, with trade-marks of many of the appliance manufacturers represented appearing on the sides. A fluorescent lighting system, powered from the truck engine, gives it "store appeal" during the evening hours.

The interior includes equipment which permits a long power cord to be plugged into the nearest outlet for actual demonstration of the appliance. A 3-ton package air conditioning unit keeps the "rolling store" at a comfortable 75° in the hottest weather, and there is likewise a rotary antenna which permits

picking up television programs.

"We can show a dozen appliances simultaneously and all in operation," McDonough said. "This is probably the most important single selling factor. However, it is obvious at a glance that the rolling showroom represents a considerable investment and thus our prospects are more certain that they are dealing with a well-established firm."

Cost of the rolling showroom was split between Michael's and another appliance dealership in the Philadelphia city. Each firm utilizes the truck for three days a week. Thus, it rolls over the streets of Philadelphia with a 5-man canvassing staff 6 days per week.

'FREE LANCING' IN POPULATED AREAS PAYS OFF

To date, the firm has found "free lancing" in well populated neighborhoods equally as profitable as the "appointment system" whereby the presence of the rolling showroom in a neighborhood at a specific time is announced through newspaper ads.

"We have been using circulars of the throw-away type to herald the arrival of the bus at least two or three days ahead of time," McDonough added, "and we have found that this stimulates enough curiosity that large numbers of women are on hand wherever the unit is parked."

Naturally, it will take a long time to amortize the \$9,000 investment split by the two firms in the vehicle. However, the mere fact that it stimulated sales at a time when most appliance dealers were experiencing slow sales has made the investment more than worth-while, both members are convinced.

NOW! You can SELL EVERY

HERE'S the amazingly LOW PRICED Automatic Ice Flaker that opens up hundreds of new prospects in every area! Big volume users can reduce time and labor expense with a multiple unit installation of SUPER-FLAKERS. Locate one at every point where ice is needed. In many cases this can be done at no greater cost than one large machine!



UP TO 25 BUSHELS OF SUPER FLAKED ICE A DAY FOR AS LITTLE AS 1½¢ PER BUSHEL!

You can sell a SUPER-FLAKER to 9 out of every 10 flaked-ice users, and there is an extra long dealer discount which allows plenty of margin to the dealer for trade-ins, special deals, etc. Even though these units are low in price, you make real profit on every sale!

The Scotsman SUPER-FLAKER is available in two capacities... 350 to 430 lbs. daily (approx. 12 bushels) or 750 to 900 lbs. daily (approx. 25 bushels). Under average conditions, the 12-bushel size operates for as little as 20¢ a day... the 25-bushel size for about 35¢ a day! Each capacity is available in either the complete Storage-Type Unit or the Continuous-Flow Type Unit. A model to fit the need of 9 out of every 10 ice users.

The patented freezing and shaving mechanism of the SUPER-FLAKER is the simplest, most dependable flaked ice maker in the field! Only one moving part under refrigeration!

The SUPER-FLAKER produces the perfect, all-purpose ready-to-use ice for cooling, packing, or displaying poultry, fish, fruit, vegetables, etc. "Super-Flaked Ice" is free flowing, fast cooling, and long lasting. It's as pure as the water you drink... no sharp edges to damage fish, poultry, vegetables, fruits, etc.

The SUPER-FLAKER has been proved dependable and a money-saver beyond belief—by poultry, fish, and produce packers, by soda fountains, dairies, restaurants, grocery stores, etc.

SUPER-FLAKER requires only one simple plumbing connection... just a ¼" line and saddle valve! Only 40 inches high... fits anywhere! Designed to fit under, alongside, or on top of any counter or table. Plugs into regular 110-115v A.C. outlet.

Start selling the mass market now! Send coupon below!

GET FULL FACTS ON THESE MASS MARKET UNITS

MAIL TODAY TO
AMERICAN GAS
MACHINE CO.
ALBERT LEA, MINN.

FIRM NAME _____

INDIVIDUAL _____

ADDRESS _____

SEVERAL SELECT TERRITORIES STILL OPEN!

A-72



New, Low-priced BAR STOOL

Outstanding Eye-appeal that spells Buy-appeal with built-in quality for permanent customer satisfaction. Heavy 16 gauge cold-rolled triple-plated chrome tubing. Two piece top. Choice of colors. Durable upholstery over rubberized hair.

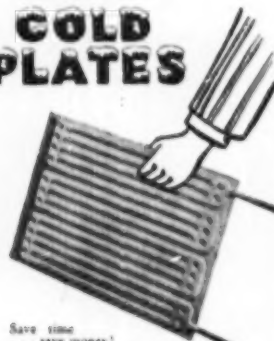
\$11.90
LIST

Write for illustrated catalog.



ST. LOUIS, MO.

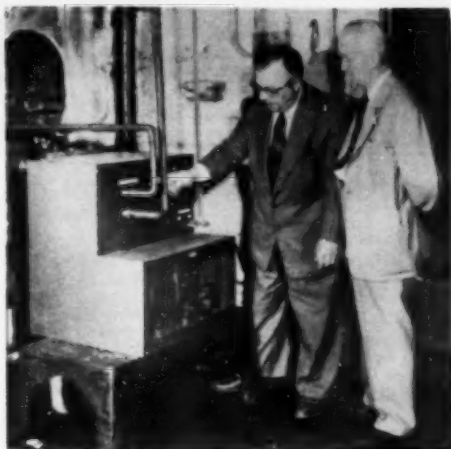
DEAN "Job Tailored" COLD PLATES



Save time... save money! Any size, any shape, most metals! More and more the choice of conscientious refrigeration engineers. Get the full details today!

WRITE FOR TECHNICAL DATA BOOK

DEAN PRODUCTS, INC. Sterling 9-3400
1042 DEAN ST. • BROOKLYN 16, N. Y.



COMPACT COOLER-COM-PRESSOR assembly installed in Detroit office building to replace drinking water chilling system. Fits neatly on base of old ammonia compressor. Contractor Bill Euth (left) points out identifying labels placed on Heat-X unit to Ed Lee, parts wholesaler.

Packaged Cooler Replaces Water-Chilling Tank In Large Detroit Office Building

DETROIT—Replacement of an out-moded water-chilling plant with a self-contained Heat-X R25G cooler-compressor assembly to supply drinking water for the Professional Bldg. here has been completed by Euth-Lambrecht Co., local refrigeration contractor.

Bubblers on each of the six floors of the building are supplied through a closed water-circulating system with a pump driven by a 1/2-hp. d.c. motor. Previously the water had been cooled in a chiller tank that

measured 28 in. in diameter by 58 in. long. Refrigeration was supplied by a 2-hp. ammonia machine. It was pointed out.

The new unit which combines condensing unit and liquid cooler is 28 1/4 in. high, 26 1/2 in. wide and 22 1/2 in. deep, small enough in fact to be mounted on the base of the old compressor.

Housed within the steel case is a Heat-X cast aluminum liquid cooler chilled by a 3/4-hp. Servel hermetic condensing unit. Although the cooler

assembly is available with an air-cooled condenser, this application uses a water-cooled unit.

Nominal cooling capacity of this model is 25 gals. per hour. Actual rating is 24.4 gals. per hour when cooling 80° F. inlet water down to 45° in a 90° ambient air temperature.

Installation of the unit was relatively simple. Following removal of the old chiller tank and compressor, the new packaged cooler was set on the old unit base, water lines connected to the drinking water pump plus an inlet and drain for condenser water, and the electric cord plugged into a convenient outlet. Chilled water lines, of course, are insulated.

Bally Names H. E. Johnson Mgr. of FF Cabinet Sales

BALLY, Pa. — Appointment of Harry E. Johnson as manager of ice cream and frozen



H. E. Johnson

sales manager. Johnson, who has been with Bally since 1945, has been a factory representative for the porcelain division and district sales. His first duty will be the sales development of the new Bally open style freezer for ice cream and frozen food display, according to the announcement.

Commercial Refrigeration

Nebraska Plans Expanded Refrigerated Storage Facilities at State Institutions as Economy Move

LINCOLN, Neb.—Plans for modern refrigerated storage facilities are being made at state penal and charitable institutions in view of long range economy, it was reported by Mrs. Harold Prince, chairman of the State Board of Control, which administers the affairs of 19 large state institutions.

The plans also provide for greater sanitation in institutional food handling as well as saving the state money by storing more products produced by the inmates of such institutions as the state penitentiary, state hospitals, men's reformatory, etc.

The program has already gotten under way, Mrs. Prince pointed out. Extensive improvements including a walk-in cooler are being made currently in the state reformatory kitchen near Lincoln. At the state penitentiary, the cannery has been renovated and a new slaughterhouse is being constructed with modern sharp-freeze and refrigerated storage facilities.

Economy is a major consideration in these improvements, she explained. When the state spends \$1.65 a day to feed each prisoner at the state penitentiary, proper use of refrigerated storage can soon pay for itself. At the state reformatory where refrigerated storage is more adequate and a larger percentage of inmates participate in producing food "at home," the food cost per inmate is only 81 cents a day.

Even though the new slaughterhouse at the penitentiary will cost an estimated \$35,000, Mrs. Prince said it would pay for itself in 10 years in storage cost savings alone. At present the institution has to store its frozen meat with a downtown Lincoln firm and the storage bill is high.

Penitentiary livestock now is being butchered in an inadequate build-

ing at the reformatory, several miles distant, she continued. Worst factor is that there are no freezing facilities. The new slaughterhouse at the penitentiary will eliminate all those problems.

At the new reformatory kitchen, the major advantage will be large freezing facilities. With its big garden, the reformatory will be able to service and sell frozen foods to other state institutions, at an over-all savings to Nebraska tax payers.

The State Board of Control recently added a full-time sanitarian to its staff, according to Mrs. Prince. He is Angus Kerr of Lincoln, who has been traveling over the state visiting the institutions.

"He has made many valuable suggestions for food service, safeguarding sanitation through modern refrigeration facilities, and saving pennies, too," she declared.

Worker To Direct Research For American Radiator Corp.

PITTSBURGH — Herwart Werker has been named director of research for American Radiator & Standard Sanitary Corp., Theodore E. Mueller, president, announces.

Werker was promoted to his new position from the post of manager of the heating division of the research department. In his new job he will direct all plumbing, heating, and air conditioning research conducted by the firm.

American-Standard research facilities were recently combined in new, modern laboratories at 834 East Broadway in Louisville, Ky. These laboratories are devoted to the development of new products and new materials in the heating, cooling, and sanitation fields.

ICE USER (LARGE or SMALL)

HERE'S a truly dependable, Low PRICED, Automatic Ice Cuber that is setting new sales records! Quickly pays for itself. Every restaurant, tavern, hotel, club, etc. is a prospect for one or more of these low-cost units!



UP TO 5 BUSHELS OF "Super Cubes" A DAY FOR AS LITTLE AS 5¢ PER BUSHEL!

Yes, here is the Automatic Ice Cube Maker that you can sell to 9 out of every 10 ice cube users in your territory! It's Low in price, TOPS in dependability, and LONG on profit for the dealer. The extra-long dealer discount leaves plenty of margin for trade-ins, special deals, etc.

► The Scotsman SUPER-CUBER out-values and out-classes any Automatic Cube Maker in the field. It makes the perfect cube (see right). It quickly pays for itself. Gives the user "Super-Cubes" for almost nothing . . . for as little as 5¢ a bushel!

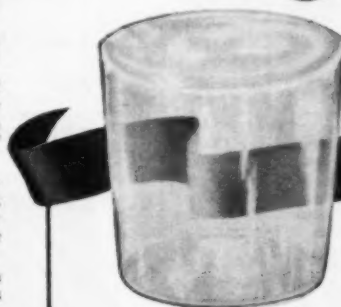
► This outstanding machine is completely automatic. Turns itself on and off. The heavily-insulated 2 1/2-bushel stainless steel storage bin is kept filled automatically. No bothersome trays, nothing to watch.

► Fits anywhere . . . no costly remodeling. Only 35" high . . . fits under bar or counter with inches to spare. Plugs into regular 110-115 volt A.C. outlet. Only simple plumbing connections required.

► Unequaled dependability! The SUPER-CUBER has been proved the most dependable by actual users: taverns, hotels, restaurants, hospitals, clubs, etc. Only one moving part under refrigeration! No trouble-making complicated cutting mechanism. Freezing compartment never requires cleaning . . . it's rinsed clean each time cubes are harvested. Equipped with the finest automatic controls.

► Get in now on this mass market item! Several select dealer territories are still open. Send coupon today and take advantage of the SUPER-CUBER profits that are ready and waiting for you!

AMERICAN GAS MACHINE CO.
ALBERT LEA, MINN. • QUALITY PRODUCTS SINCE 1896



"SUPER-CUBE" ACTUAL SIZE

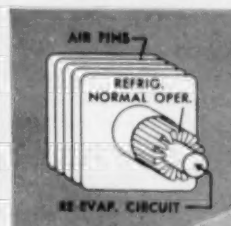
THE PERFECT CUBE—NO HOLE!
IT'S BIG AND SOLID AND ROUND!

The Perfect Cube—No-Hole! "Super-Cubes" are BIG and SOLID and ROUND! They keep drinks cold LONGER because they last LONGER! "Super-Cubes" are NOT fast melting like thin slab-type cubes or cubes with holes. Less mix is required per drink.

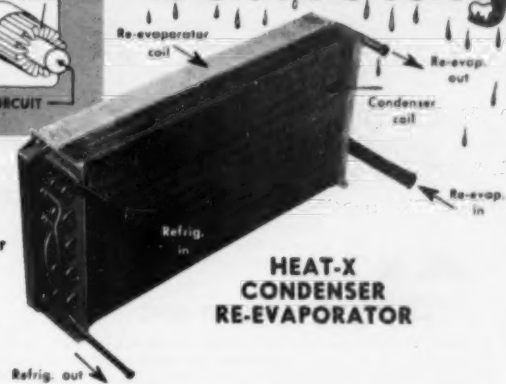
"Super-Cubes" are EASIER to handle . . . they fit any glass WITHOUT forcing! No sharp edges to cut fingers. "Super-Cubes" are crystal clear . . . never freeze together. They're PURER than drinking water! They're the ONLY perfect cubes!

... a NEW idea in

Defrosting



Section of Longitudinal Finned Tube of Re-evaporator



HEAT-X CONDENSER RE-EVAPORATOR

From warm air to hot gas . . . hot gas to defrost an ice coated coil. Thermocycle defrost is a simple refrigeration system utilizing the heat from room air to free a coil from ice. Heat-X offers the Condenser Re-evaporator coil — the unit that picks up this heat from the room air. Compact, highly efficient, you'll find it worthwhile investigating.

Write today for specification sheet and application data.

THE HEAT-X-CHANGER CO., INC.
BRIWSTER, NEW YORK

heat-x

Send me complete details on Heat-X Condenser Re-evaporators.

NAME _____
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

Chill Chest Chart Tells Freezer Story to Dealer

DEERFIELD, Mich.—A new 24-page "Chill Chest" sales-story chart for use at dealer meetings has been mailed to distributors, according to J. W. Rietzke, sales promotion manager of Revco, Inc. here.

Rietzke said the chart is unique in that its story can be timed to suit any dealer audience.

Built in three phases, the chart first depicts a growing need for food freezers in the home by pointing up the direction taken in the change in the nation's eating habits during the past 10 years: this change coming about by the tremendous increase in the use of frozen foods.

In the second phase is shown the pace being set in freezer sales by many aggressive dealers and where these freezer sales are being made; also, how the dealer can get his share of this fast growing market.

The third phase discusses the new 1952 Chill Chest freezer line. It introduces as the key to more sales the use of a new miniature Chill

Chest freezer which is self contained as a demonstrator. This gives a complete customer selling story for the dealer to use, Rietzke said.

Designed by Revco's agency, Beeson-Reichert, the chart is of the easel type developed in two-color silk screen process. Its pages measure 17 in. by 22 in.

Sanitary Names Chicago, Southwest Distributors

FOND DU LAC, Wis.—Appointment of two, new full line distributors for Quicrefree refrigerators and freezers has been announced by Harry Ryan, sales manager for the Sanitary Refrigerator Co. here.

In Chicago, H. U. Mann Co., Inc., will handle the Quicrefree line in both the metropolitan and suburban areas. The company has recently moved to larger and more modern quarters at 310 S. Green St.

The W. F. Distributing Co., 1231 Wazee St., Denver, will represent Quicrefree in Colorado, southwest Wyoming, and southwestern Nebraska.

'Freezer-Food' Plan Merchandising

Grand Rapids Market Finds It Helpful To Have Home Economist Advise Buyers on Food Purchase

By John O. Sweet and George M. Hanning

GRAND RAPIDS, Mich.—While appliance dealers look upon the food club plan as a way to sell freezers, Robert B. Ryskamp, general manager of Ryskamp Bros. Markets, considers the freezer to be a "necessary evil" and food merchandising to be the heart of the idea.

"We are not interested in a one-shot deal," Ryskamp declared. "What we want is the repeat business on food purchases. We think the plan is a sound way for us to build up our food volume."

Ryskamp's approach to the food plan is also that of the customer's, he believes. "They are interested in saving money on their food bill," he declared. "If they must have a freezer to do that, all right. They don't care much about what kind of a freezer it is, just so it helps them save on food."

Ryskamp is a newcomer to the food plan idea, having launched his initial advertisement on June 2. But response was immediate and enthusiastic, he said.

A coupon was included in the full page advertisement and these began coming back to the store almost as soon as the papers hit the street. The telephone began ringing at about the same time.

Though the quickness of the response surprised him at the time, he reasoned later that the large number of articles on frozen foods in women's service magazines, the national and local promotion of food plans (there are four in Grand Rapids, Ryskamp said) had made the idea familiar to the general public. He was merely cashing in on that pent-up curiosity, rather than hitting a "cold" market.

Market Studied Plans Across the Nation

Getting into the food plan was no "spur of the moment" idea for Ryskamp. The firm studied the plans in other cities, particularly in California and Chicago.

In addition it secured the services of an "expert" in the field, A. W. Serpa, formerly a district manager in the Midwest for Weber Showcase & Fixture Co., who became vice president, treasurer, and general manager of Ryskamp's Family Food Club.

In conjunction with Serpa, Ryskamp figured out a plan that would incorporate all the best features of other plans, avoid as many of the faults as possible, and fit into the 32-year reputation for handling high quality foods that Ryskamp Markets has earned here.

Ryskamp explained that his firm was ideally suited to handle the food plan because it was already handling meats on a wholesale basis, had a refrigerated delivery service established over a 50-mile radius around Grand Rapids, and had considerable experience in cutting, packaging, and freezing meats for storage in home freezers.

Offered Chest-Type and Upright Freezers

The food club took on the Gibson chest-type freezer and the Sub-Zero upright freezer to sell, giving the customer his choice of type. A separate store was rented to house the food club activities. This store is located about eight blocks from the market in a spot where there is plenty of parking space and yet is in close proximity to the heart of the downtown shopping district.

Serpa has his headquarters at this store. A full-time home economist, Mary Davis, also operates from there. Other personnel includes a secretary, and a full-time floor salesman.

The club now hires 15 full and part-time salesmen—or "food counselors," as they are called. Part-time people are drawn from the ranks of factory workers, teachers off for the summer, and housewives.

These are thoroughly trained and given flip-charts that cover the general food savings idea and lead right up to the point where the "counselor" starts figuring out just what the individual family will require.

The salesmen are paid a flat sum for each sale rather than a percentage commission. Ryskamp figures

that it doesn't matter particularly what size freezer the counselor sells, his efforts are about the same. The

Although this operation is concerned with a food market, rather than a freezer dealer, it is felt that the ideas presented are of interest to our readers. The article reveals the food dealer's angle and his philosophy on the subject. The firm's 32 years in the retail food business should make it an authority on what the customer wants from the food half of the 'Freezer-food' plan.

counselors are trained not to sell a family a freezer that will be too small, however.

Salesmen Were Among First Customers

"The success of our selling story can be measured by the fact that many of our salesmen were their own first customer," Ryskamp asserted. "They were so impressed that they joined up themselves."

Financing is done through a local bank, which handles freezer and food paper separately. The firm selected the bank because it felt that many people would shy away from a plan handled by a finance company.

The bank requires 15% down on the freezer with 24 months to pay. On the food, which is sold, in the initial order, in \$150 or \$200 lots, four to six months are given with no down payment. The bank will not handle food paper without freezer paper, but will renew food contracts when they expire.

"We don't tell people that they have to buy a freezer to belong to the club. They can join if they just want the food, but they will have to arrange their own financing," Ryskamp said.

Miss Davis, the home economist, is going to have plenty to do under

the Ryskamp plan. After the counselor has closed a sale, he immediately arranges an appointment for the customer with Miss Davis. This meeting is held preferably at the store, but at the home if the customer wishes.

Home Economist Helps With Food Ordering

Miss Davis' job is to explain the freezer to the customer and to counsel her on ordering food.

"If we let the customer place their own order first," explained Ryskamp, "they go hog wild and buy a lot of fancy stuff that they don't really need. After all, buying for a freezer is a completely new experience for the average housewife. She has never purchased more than enough to last for a week or so at one time. She has no idea of the requirements for purchasing on a six-month basis."

"During the interview with the customer, Miss Davis finds out what the family's eating habits are; what vegetables and fruits they like, what types of meat they eat large quantities of."

"With this information, she can advise the family on how much of each item they should order to have a balanced stock in the freezer and to have a balanced diet at the table."

"She also does an important service by explaining to the customer just what she is getting when she orders wholesale cuts of meat, pointing out how many steaks, roasts, ribs, etc. that she will get and how much of the wholesale cut will be fat, bones, and trimmings."

"She explains that we will buy these waste products from the customer at the current rate for those particular parts. This may be only a few cents a pound, but it impresses the customer with the fact that we are not trying to pull the wool over her eyes and are playing fair. It also gives the customer a more accurate

(Concluded on next page)



Oasis is the "easiest to sell" water cooler, because no other cooler gives customers so much more for their money! The buyer who "shops around" almost always decides to buy Oasis, because Oasis gives him *three* extra-value features—features that are sales-making "talking points" for you:

1. NO SQUIRT!

The patented Oasis "Fountain" delivers a smooth-flowing, level drink, regardless of varying water pressures. No unexpected "eye-wash!"



2. DOUBLE CAPACITY!

Even on the hottest days, there's plenty of water from the famous Oasis "Pre-Kooler." It nearly doubles the volume of cooled water served in a given time!



3. QUIET OPERATION!

The fanless Oasis condensing unit not only means fewer moving parts and fewer service problems, but also completely eliminates all fan and fan motor noise!



And when you sell Oasis, you can sell the type and size cooler your customer needs—because Oasis offers a *complete line* of coolers: 3 to 20 gallons-per-hour capacities, in hand or foot-operated models. Send coupon today for free catalog and details on the fast-selling Oasis line of coolers, and the sensational Oasis Air Drier that stops moisture damage.

OASIS



the world's largest manufacturer of
ELECTRIC DRINKING WATER COOLERS

The Eboe Manufacturing Co.
460-B W. Town St., Columbus 8, Ohio

Send me the full details on the profits I can make with Oasis Water Coolers and Oasis Air Driers.

Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

Advertised in
TIME and
NEWSWEEK



Grand Rapids Brass

COMMERCIAL
REFRIGERATION
HARDWARE
FOR NEW
EQUIPMENT
OR
REPLACEMENT



Locks, Strikes
and Hinges
that contribute
to Quality
in the
World's Finest
Refrigerators



Grand Rapids Brass Company

GRAND RAPIDS, MICHIGAN
DIVISION OF CRAMPTON MANUFACTURING COMPANY

WHAT'S THE CATCH?...NO CATCH TO IT! HERE'S HOW

THIS UNIQUE PLAN WORKS TO SAVE YOU MONEY! SAVINGS ON FOOD ALONE CAN PAY FOR YOUR HOME FREEZER... AND THEN YOU KEEP RIGHT ON POCKETING THE SAVINGS EVERY YEAR!

First—You buy in quantity at substantial discounts... and in season... when prices are lowest.

Second—THE BUY U. S. GRADED GROUND BEEF, LARD, POSE, BAKED PASTRY, VEAL, and FINE Shaw Corp and Richard's Choice Vegetables, Fine Juices... you get delivered to your door... at a substantial discount.

Third—You can save these savings. Whether it's meat or the other, either on a balance basis.

Fourth—You can save these savings. Whether it's meat or the other, either on a balance basis.

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Hundredth—You can save these savings. Whether it's meat or the other, either on a balance basis.

NARDA Told It Must Fight To Eliminate Price Cutters, Direct Sales by Distributors

CHICAGO—The National Appliance & Radio-TV Dealers Association must employ every means in its power to stop the franchising of "notorious price cutters," direct sale by distributors to consumers, and the selling to builders for less than dealer cost, members were told by A. W. Bernsohn, managing director.

"But," he added, "we'd be mighty unfair to those suppliers and manufacturers who yielded to these wishes if, in so doing, we didn't see to it that they still got their fair percentage of our markets. So NARDA has a positive job to do in helping every member build his own volume and do a better selling job."

Bernsohn spoke at NARDA's mid-year meeting held here recently. He warned that while the association has brought about a "collection of minor miracles," "we have some of our toughest fights ahead of us."

"For one thing, we must recognize that nobody is going to give us a single damned thing. Friendly as we have been with the manufacturers on many counts, we must remember that it was their representation that made a clever, nearly-concealed little twist in the FTC's radio and television industry trade practice rules changing one rule from a stipulation that the price advertised include all required cost except state and local sales tax to its including all cost except Federal excise and local sales tax."

"Also on the matter of price discrimination, it was no accident that

that reference was left out and only a positive stand by NARDA and the parts distributor representation there that got the Robinson-Patman Act appended to the rules.

"I'm afraid that some day we're going to have to defend even that law."

"The Robinson-Patman Act, which prohibits price discrimination, is one some manufacturers find a pretty dangerous threat to their relations with builders and contractors."

"They don't want the bill on the law books. We don't want the practices in our industry that this act makes illegal. So we're going to have to remain alert and prepared to let our lawmakers know how the dealer-voters stand."

"Eventually we will have to find test cases against price discrimination within the industry and to use this law to wipe out one of its unhealthiest practices."

Bernsohn said other parts of NARDA's program include:

1. Development of a master plan on how to sell driers to be made available to the entire industry, this plan will be worked out in cooperation with the American Home Laundry Manufacturers Association. Tests are scheduled to be made in Milwaukee and Houston.

2. A survey of the membership soon by the committee on a universal bookkeeping system "as a step toward giving you closer control over your operation and help in plugging those many leaks through which

your profits drain out."

3. Expansion next year of NARDA's cost-of-doing-business study, and the conducting of other economic studies.

4. The campaign for one annual basic line of major appliances and television receivers from each manufacturer.

Bernsohn also urged that a series of state and regional meetings be conducted on the pattern of the one-day clinic held recently in Texas which drew an attendance of 175.

McCollum-Law Take On Westinghouse Full Line

DENVER—Appointment of McCollum-Law Corp. here as a distributor for the full line of Westinghouse home appliances was announced recently by T. J. Newcomb, sales manager for the Westinghouse Electric Appliance Div.

The new distributor will cover Colorado, Wyoming, and the Albuquerque N. M. territory. Ten of the distributor's salesmen recently attended a week-long training school at Mansfield.

Harrisburg Dealer Group Elects New Officers

HARRISBURG, Pa.—New officers of the Harrisburg Area Appliance Dealers' Association, chosen at the organization's June meeting, are J. Henderson Stock, Mechanicsburg, Pa., president; LeRoy Weiss, Harrisburg, treasurer; and Richard A. Lank, O. B. Lank & Sons, Harrisburg, secretary.

EVERY FREEZER IS GUARANTEED FOR 5 YEARS IN WRITING BY THE MANUFACTURER! FREE DELIVERY WITHIN A 50-MILE RADIUS OF GRAND RAPIDS.

PHONE 9-4306

RYSKAMP'S FAMILY FOOD CLUB
1000 Main Street, N. W., Grand Rapids, Michigan
I want to know more about how Ryskamp's Family Food Club will save me money. Please send me information at no obligation and no cost.

OR MAIL THE COUPON AT ONCE

We will be happy to give you detailed information on how to save your family food problems.

MEAT	POULTRY	SEAFOOD	VEGETABLES	FRUITS	DAIRY	OTHER
1. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
2. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
3. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
4. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
5. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
6. 12.00	5.25	10.00	10.00	5.00	5.00	5.00
7. 12.00	5.25	10.00	10.00	5.00	5.00	5.00

Figures in above chart are based on average per capita consumption of food available for freezing and purchased in quantity during winter months. "In season" meats—(C), (D), (E), (F), (G), (H), (I), (J), (K), (L), (M), (N), (O), (P), (Q), (R), (S), (T), (U), (V), (W), (X), (Y), (Z).

PORTION of one of the full-page advertisements run by Ryskamp's Family Food Club.

Market Sponsors 'Freezer-Food' Club--

(Concluded from preceding page)
idea of how much savings she is actually making.

Steaks at 59 Cents a Lb.

Debunked by Grocer

"We think that food plan operators who advertise steaks at 59 cents a pound are doing a disservice. They do not explain that this price applies only to wholesale cuts, which also includes a lot of bone and suet at the same price."

"When a prospect tells us she can buy just steak at that price, we ask her where. We will buy all we can get our hands on at 59 cents a pound."

Ryskamp said that another factor in helping the customer understand just what she is getting is a mimeographed sheet of meat cutting instructions that the home economist helps her fill out. This sheet provides spaces listing the different cuts of meat. Opposite each cut, the customer indicates the number of pounds she wants or number in a package. At the bottom she indicates whether or not she wants the fat trimmings.

Across the bottom of the sheet appears this statement: "Price includes aging, processing, cutting, wrapping, labeling, dating, sharp freezing, inventory, and delivery."

What's more, the customer is encouraged to go to the store and select her own half or quarter of beef and to watch the cutters and packagers work.

When the packer makes up the order, he indicates on this same sheet the number of packages there are of each cut. Then when the order is delivered, she can check for herself to see that everything she ordered is delivered.

A similar sheet is used for ordering frozen fruits and vegetables.

Recommend Side of Beef For First Order

"We recommend that the customer take a side of beef first rather than just a quarter, so they can judge for themselves which quarter they consume more rapidly," Ryskamp added.

"After placing her initial order, the customer has the privilege of calling on Miss Davis at any time for further advice on ordering or on any phase of operating her freezer," he declared.

"We keep track of what the cus-

tomers have purchased from us, and when we believe that her stock should be getting low, Miss Davis will call her and offer her services. We also plan to make a telephone canvas of our freezer customers whenever we have a good buy on any particular food.

By suggesting purchases when prices are most favorable, we believe that we can both help the customer make the savings we tell her she will make and build up her patronage of our store.

"Right now for instance, turkey prices are low because the breeders are culling out their flocks and getting rid of those that have stopped laying. We can recommend that the customer get her Thanksgiving and Christmas birds now at prices considerably lower than they will be next winter."

\$50 Minimum Order Required For Quantity Discount

"In order to be entitled to quantity discounts, we require that each order placed amount to \$50 or more."

Ryskamp emphasized that this is the way the plan is working now. However, the lines are not frozen and changes will be made as the needs develop.

"Already we can see that we may have to take Miss Davis out of the sales store and put her in the market when the reorder business starts to build up," he commented. "All the telephoning for reorders will be done from the market and I think she will be able to work more efficiently from here."

He noted that though the firm has gone in strongly for newspaper advertising and has two spot radio commercials on the plan daily, it is constantly studying the possibilities of other forms of advertising.

Plan Direct Mail Campaign

"We have found that other food plan operators have obtained their best results from direct mail and we may eventually get into it, too," he said.

"We are also running our own tests to determine just how much people will save by buying foods in our club so that we can give them even more definite figures in our sales presentations."

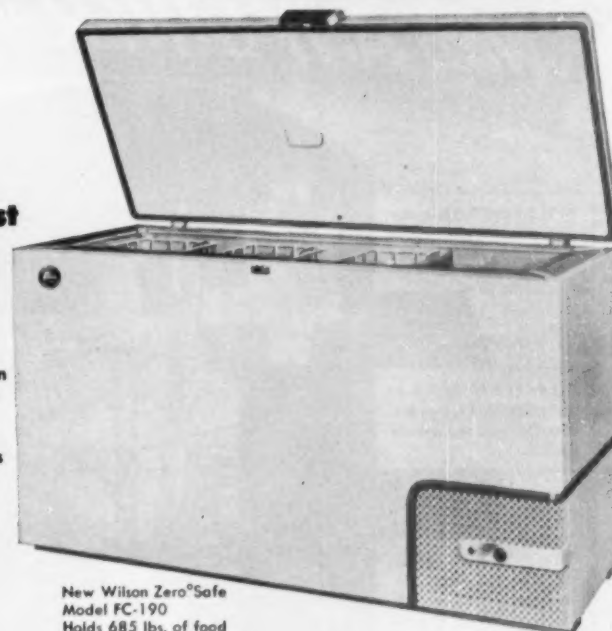
"Another thing we have done is to school every one in our market, from the boy who sweeps the floor on up in the details of the plan. When customers in the market ask questions, anyone there can give them the correct answers."

"We are very particular about this because when I shopped our competitors' plans, I often found that the ordinary clerks and other help did not know anything about it. They would pass me on to someone else, who also might or might not know how their plan operated. We are making sure that everyone knows how our plan operates and can give intelligent answers."

STILL ANOTHER ADDITION TO THE WILSON FREEZER LINE

NEW, POPULAR
SIZED 19 cu. ft. Chest
HAS EVERY FEATURE
For Fast, Easy Sales

- ★ large fast freeze compartment
- ★ all steel and aluminum construction
- ★ automatic warning light
- ★ interior light
- ★ sliding baskets, adjustable dividers
- ★ adjustable temperature control
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- ★ 5-year food spoilage warranty available.



New Wilson Zero-Safe
Model FC-190
Holds 685 lbs. of food

You've heard big things were happening at Wilson. Here's proof... another new chest freezer with so many features that sales are bound to hit new highs.

If you're looking for a freezer line that you can go places with—look into Wilson. A few desirable distributor franchises still available. For information, write, wire or phone

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REFRIGERATION, INC.

101 Glenwood Ave.
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OTHER WILSON FREEZERS

The Wilson line of home freezers is one of the most complete lines ever offered by a single manufacturer and includes:

- 4 CHEST MODELS
8, 15, 19, 24 cu. ft.
- 4 UPRIGHT MODELS
15, 18, 23, 30 cu. ft.
- 9 UPRIGHT MODELS (SECTIONAL)
30, 60, 90 cu. ft.

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SUCTION CAP TUBE
ASSEMBLIES
ANY SHAPE OR SIZE
TO YOUR SPECIFICATIONS

SEALED UNIT PARTS CO., INC.
261 East 161st St.
New York 51, New York

They'll Do It Every Time By Jimmy Hatlo

HOW IGGY, THE DEMON SALESMAN, SAID HE'D HANDLE THE SLOW-PAY CUSTOMER WAS ONE THING . . .

YES INDEED—HE HANDED HIM ALL RIGHT—LIKE A MUSEUM HANDLES A MING VASE—VERY KID GLOVE-SY!



Do You Have 'Both Feet On The Ground?'

DECIDE FOR YOURSELF!

...Compare **TEMPRITE** with ANY OTHER liquid Cooler

EVERY TEMPRITE is supplied with an infinite pressure control valve. Assures perfect exit temperature . . . ALWAYS!

EVERY TEMPRITE is supplied with a liquid control float valve. No additional controls required.

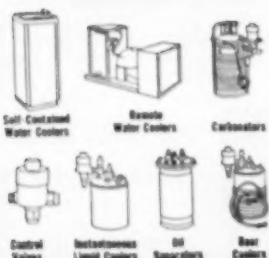
EXTREMELY HIGH CAPACITY through exclusive patented principle! Cooling coils directly submerged in liquid refrigerant and heat transfer is instantaneous through a single wall only! (All coolers rated at 40° exit temperature, but lower or higher temperatures are available . . . without the addition of extra equipment.)

EVERY TEMPRITE is supplied with liquid and suction line shut-off valves, simplifying installation.

LOW-SIDE FLOAT CONTROL assures instantaneous reaction to load, and positive closing on off cycle . . . thus guaranteeing refrigerant flow proportionate to load requirement.

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

One Hand In the Till —How To Save On Income Taxes

IF ANY PARTY stays in power too long (20 years, in this situation) it's likely to get out-of-hand and corrupt, whether it's Democratic or Republican—or Socialist Labor or whatnot.

And when big government gets into business in a big way, there's tremendous opportunity for siphoning into one's own safety deposit boxes (and those of friends) some of the millions from the billions Big Government tosses out and away. That is, if you "know who."

Government corruption on tax matters first appeared early in 1943 under Commissioner Hannegan, who no longer is with us. Political cases, in which influential party politicians were interested, were not prosecuted. Files were "lost" or burned, and gamblers who contributed to The Party saved millions on their income tax bills.

"Helpfulness" on back taxes owed was the pay-off for party activity and contributions in case after case.

Several Donkey Chairmen since 1944 have been involved one way or another in these shenanigans.

Four of them are alleged to have taken tremendous profits out of a company which presumably depended on an "inside" deal with government agencies for its business.

Nor were questionable practices confined to the Big Shots of the party-in-power. Instance:

Cigarette and liquor tax evasion by political favorites who made heavy contributions to various political funds are an old story in Washington, and also in many state capitals.

Millions of dollars were picked up by fast-buck boys who got their hooks into Alien Property Deals. Naturally many of these insiders were party wheelhorses or fund contributors.

Lucrative sinecures for politicians who swung heavy RFC loans have been altogether too common, along with conveniently overlooked frauds in schools which took advantage of the G. I. Bill of Rights.

Furthermore, the Administration's budgets have become so big that apparently nobody understands or comprehends them. Chiselers who have made proper connections with improper officials, however, know where to chip off pieces, it seems.

In short, the big money in recent years has gone to people of questionable morals. They have helped keep in office politicians "who looked the other way while the till was robbed."



Room Cooler Capacity

ACRMA Estimating Form Allows Salesman To Give Specific Answer To Question of How Large a Unit Is Needed To Cool Particular Room

WASHINGTON, D. C.—Room air conditioner salesmen frequently confuse and mislead the buyer with an "up-to" answer to the question "How large a room will the unit cool?" So stated Herbert L. Laube, chairman of the room air conditioner section of the Air Conditioning and Refrigerating Machinery Association, at the 44th annual convention of the appliance division of the National Association of Electrical Distributors in Atlantic City.

In reply to the question: Is any progress being made toward arriving at an adequate industry rating for various types of room air conditioners? Laube said, "That is a question, usually in a simpler and more condensed form, every prospective buyer invariably asks the room air conditioner salesman, but the salesman's answer is not always the kind which inspires confidence or results in a complete meeting of minds between the buyer and the seller."

'Up-To' Answers Only Tell Part of Story

"Often the seller, when his prospect asks, 'How large a room will it cool?' replies with what I call the 'up-to' answer. He points to one of his air conditioners and says, 'This unit will cool a room having up to 300 sq. ft. of floor space.' Rarely does the seller give the corollary to this answer, namely: 'Additionally, this unit will cool a room down to, say, 60 sq. ft. of floor area.'"

"Take a room of fixed size here in Atlantic City or, better yet, take two rooms of identical size, both located here in Atlantic City. Assume that in both cases there are two room occupants. Thus, the size of the room, its occupancy, and the climate to which it is exposed are the same in both cases."

8 Other Factors To Be Considered

"Depending on eight other factors, however, the variation in the actual size of a room that a specific room air conditioner will properly cool will vary as much as 700%, depending on these eight additional factors."

"Any reputable make of 3/4-hp. room air conditioner may be suitable for a room having a floor area of anywhere from 70 sq. ft. to 500 sq. ft., depending on the following briefly-stated factors:

"1. Differences in room location. In this latitude, a room on the north side of a building can be adequately cooled by a much smaller unit than a room on the southwest corner, where the sun heat is felt most severely."

"2. Area of the room's windows. "3. Extent of outside shade from trees, other buildings, etc."

"4. Construction of the building itself: whether it is an uninsulated frame house, an insulated structure, or has heavy masonry walls."

"5. Ceiling height: whether it is 7 1/2 ft. or possible 12 ft."

"6. Construction and location of the ceiling: Is it insulated, is it uninsulated but under occupied space, or is it uninsulated and adjacent to a hot roof or attic?"

"7. Is the room on the ground floor or is it over occupied space?"

"8. Is the unit for daytime use or just for night use, as in a bedroom?"

"These are the reasons why the prospect is entitled to more than just an 'up-to' answer."

"Suppose a woman called at the store of one of your dealers and said she wanted to buy an agitator, the gearing, the motor, and the wringer for a complete washing machine, but not the tub, because she already had a tub at home. Even if he had it available, the dealer would be reluctant to sell her what she wanted because he would realize it might not fit the tub."

"Suppose another person walked into the same dealer and wanted to buy a complete refrigeration mechanism: evaporator assembly, ice cube trays, connecting tubing, compressor assembly, etc., telling the dealer that he wanted it for a box he had at home."

"In addition, he expected the dealer to give one year's free service. Do you think the dealer would or should make such a sale, without knowing anything whatsoever about the box the mechanism was intended to cool?"

Some Conditioners Bought Without Thought of Job To Be Done

"Yet it is common for a buyer to walk into a dealer's showroom and buy a 1/2-hp. room air conditioner without any question whatsoever being raised as to the size and character of the room the unit is expected to cool. Is it any wonder that some buyers have been dissatisfied?"

"The room air conditioner is totally unlike any other major electrical appliance. It is useless unless it is used in the proper environment. Unless the room to be cooled and the unit to cool it are 'matched,' the results will not be good. The room air conditioner is nothing more than a mechanism for pumping heat out of the room. Unless the unit does this, it cannot possibly give satisfaction."

"Has any progress been made toward giving the prospective buyer a quick and satisfactory answer

when he asks, 'How large a room will the room air conditioner cool?' Yes, most manufacturers of room air conditioners belong to the Air Conditioning and Refrigerating Machinery Association. ACRMA has developed a simplified estimating form now used by most room air conditioner manufacturers."

Only Few Hours of Training Needed To Use Chart

"With a few hours of training, the non-technical salesman can use this with accuracy. In fact, in a matter of 10 or 15 minutes after he has surveyed a room, he can tell the prospect exactly what size room air conditioner is needed for the particular space to be cooled."

"The problem has been to get the salesman properly trained in the first place and then to have him use the 10 or 15 minutes necessary in order to give the prospect a correct answer. To further speed and simplify the process, a number of manufac-

turers have gone a step further and have prepared detailed tables covering rooms of a great many sizes, all types of construction and exposure. In fact, these tables take into account all of the eight variable factors I mentioned, at least to a degree sufficient to assure proper results."

"I should say that with not over an hour of training, the average non-technical salesman could use material of this kind and make a satisfactory selection of a room air conditioner in not over two or three minutes, including the time needed to measure the size of the room."

"But the industry has not been satisfied with this—it has gone even further in speeding the selection process. Quite a number of manufacturers have developed pocket calculators. These calculators are so simple that any salesman can use them with accuracy after a few minutes of explanation. In a matter of seconds the salesman can come up with the necessary answer to the prospective buyer's question, 'Will this unit properly cool my room?'"

Davidson Represents Coolerator In Metropolitan N. Y. Area

DULUTH, Minn.—J. H. Davidson has been appointed Coolerator district sales manager in metropolitan New York, New Jersey, and upper New York state, it was announced by G. L. Rees, president of the Coolerator Co.

Davidson was previously vice president of Victor Meyer, Inc., New York; district manager in the New York area for Gibson; appliance sales manager of Westinghouse in Chicago; and district manager for Hoover Co.



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Specialists in
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Chrysler Airtemp Comfort Zone

BETTER BUSINESS BUILDER FOR YOU

Look over these ten points for profit. You'll readily see why the Chrysler Airtemp Comfort Zone is a big business builder for dealers. With Chrysler Airtemp's complete line of all year products—heating, air conditioning and refrigeration—every businessman, every homeowner is a red hot prospect. Fill in the coupon today and let us send you complete details on how you can get in the Chrysler Airtemp Comfort Zone as an authorized dealer.



Check THESE TEN POINTS FOR PROFIT

- 1 Chrysler Airtemp—a recognized name and a division of a famous, nationally-known manufacturer, Chrysler Corporation—provides an unequalled engineering background.
- 2 All Chrysler Airtemp products are sold through factory-appointed Chrysler Airtemp dealers and distributors.
- 3 Chrysler Airtemp dealers are appointed on the basis of local market opportunities.
- 4 Chrysler Airtemp products cover three basic markets—residential, commercial and industrial.
- 5 Chrysler Airtemp engineered and pioneered the original "Packaged" Air Conditioner and developed the first Year-Round air conditioning (combination heating and cooling) system for the home. The cooling unit alone can be added to any forced warm air furnace.
- 6 Chrysler Airtemp offers dealers a wide range of capacities in warm air furnaces for gas and oil—cooling units, from 1/4 HP to 100 HP—air filters and dehumidifiers.
- 7 Chrysler Airtemp sales programs are designed to capture both new and replacement markets, plus service revenue.
- 8 Chrysler Airtemp maintains 15 Regional Sales Offices, a corps of field engineers and experienced district representatives to help the dealer.
- 9 Chrysler Airtemp national advertising has developed, over the years, a great public acceptance and demand for Chrysler Airtemp products.
- 10 Chrysler Airtemp cooperative advertising plans and sales campaigns provide real, hard-hitting dealer helps at the local level.

*COMPLETE FIVE-YEAR WARRANTY

Sealed Radial Compressor units in Chrysler Airtemp "Packaged" Air Conditioners carry an optional five-year warranty, through dealers. This warranty covers compressor replacement, freight to and from the factory, plus a labor allowance for removing and installing compressor assemblies.

FOR YOUR CONVENIENCE

Airtemp Division, Chrysler Corporation AC&RH-7-52
Dayton 1, Ohio

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City _____ Zone _____ State _____

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Airtemp Division of Chrysler Corporation, Dayton 1, Ohio

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BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS.
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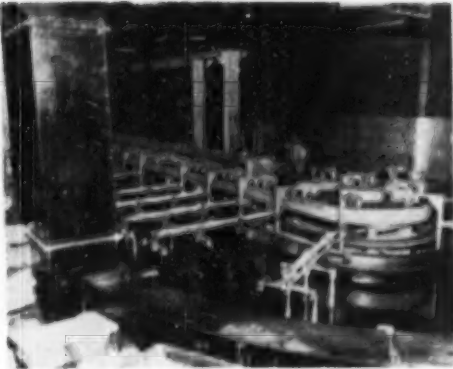
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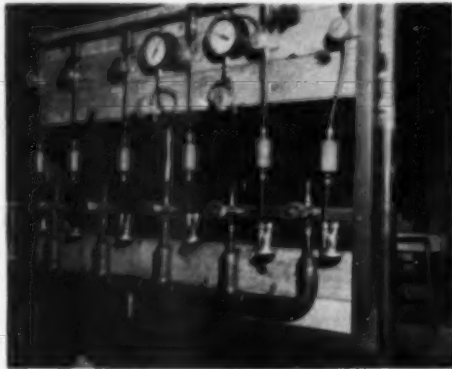
My business is:

This information helps us to make the NEWS serve you better.

Send to: AIR CONDITIONING & REFRIGERATION NEWS, 450 W. Fort St., Detroit 26, Mich.



OVER ALL VIEW of the anodizing tank at the Weatherhead Co. defense plant in Antwerp, Ohio. A direct expansion system using six lead coils on the inner walls of this horseshoe shaped tank heats the acid bath for anodizing aluminum aircraft fittings.



CONTROL PANEL is located at the head of the tank. Here copper lines from condensing unit overhead feed into the lead coils of the tank. Hand valves control each pass separately so that any one can be shut off as desired.



MOUNTED ON A STEEL PLATFORM 8 ft. above the anodizing tank is this 15-hp. water-cooled compressor which powers the system. The control panel is just visible at lower left.

Cooling Process for Sulfuric Acid

Weatherhead Uses Direct Expansion Refrigeration System In Place Of Chilled Water Method In Huge Anodizing Tank for Aircraft Parts

ANTWERP, Ohio.—A new type of cooling process for sulfuric acid solution in an anodizing tank is being used successfully in The Weatherhead Co. plant here. As explained by Irvin Hughes, foreman of the company's Antwerp Div. anodizing department, the new process makes use of a direct expansion refrigeration system rather than the usual chilled water method.

The acid bath is necessary for perfect anodization of aluminum aircraft fittings manufactured by Weatherhead for the Air Force.

This practical direct expansion system is highly unusual for this type of application in that the refrigerant must pass through lead coils wrapped around the inner side of the anodizing tank and the 15-hp. water-cooled Brunner compressor is

mounted on a steel platform 8 ft. above the tank.

The anodizing tank is a huge horseshoe-shaped steel container measuring 47 ft. by 5 ft. 2 in. by 3 ft. 2 in. and holds 4,500 gals. of 20% sulfuric acid solution.

The tank, compressor, and coils were purchased from the La Salco, Inc. of St. Louis. Rhoads Refrigeration of nearby Fort Wayne, Ind. was

contracted to install the system.

When Merrill Swaidner, Rhoads service manager, arrived on the scene, he found that plant engineers had already built the overhead platform and mounted the compressor. The platform is just above the bend of the horseshoe.

The inner side of the tank is lined with lead which serves as a negative conductor and the six lead coils are mounted an equal distance apart on the inner wall. Each pass of the coil was approximately 100 ft. long.

Control Panel Handles 6 Lines

These coils depart from the top edge of the tank directly beneath the compressor platform. Between the tank and the compressor, standard 3/8-in. copper lines are used.

Swaidner, with Robert Warner of Rhoads' service department, constructed a control panel above the point where the six lines emerge from the tank. The liquid line from the receiver above drops down to this panel into a header from which the refrigerant ("Freon-12") is distributed to each of the six lead coils.

From the header, the refrigerant passes in succession through a hand-operated shut-off valve, an A-P filter, and an Alco 2 1/4-ton expansion valve on each line. There is another hand valve on the suction line ahead of a suction manifold built into the line to trap oil.

By use of the hand valves, the operator can shut off any one of the passes as desired. Thus, in case of a break in a line, it can be blocked off so that the entire charge of "Freon," which amounts to 80 lbs., is not lost.

Gauges are mounted on the control panel so that the operator can tell whether the system is maintaining its normal 120 p.s.i. head pressure and 30 to 40 p.s.i. suction pressure.

System Holds 68-72° F.

The system maintains a temperature of between 68 to 72° F. in the bath. Such a careful temperature control is necessary for a smooth anodizing job. Hughes noted that when the temperature rises above 80° F., the coating becomes porous and its protective qualities are reduced.

To maintain this temperature, a White-Rodgers control is placed in a lead sleeve down the inner side of the tank. Movement of the parts being dipped into the tank by an automatic electrode conveyor provides sufficient circulation of the acid to keep the temperatures even in all parts of the tank.

In setting up the system, Swaidner and Warner were faced with several questions. First, they were not sure the lead coils would stand the pressure. As a safety measure, they tested them to 80 lbs. and found that the coils would do the job.

Traps Control Oil

Next, Swaidner questioned whether oil would return to the compressor through the vertical suction line. To solve the problem, a couple of traps

were created between the suction manifold and the compressor... the idea being that the trapped oil would foam at the start of the cycle and be carried back to the compressor by the velocity of the "Freon."

According to Swaidner, velocity of the refrigerant is strong and pressure drop in the suction line is only 3 or 4 lbs. He used no oil separator because he felt it would not eliminate the oil circulation; consequently the suction line arrangement was the only answer. His system has worked satisfactorily to date.

System In Use Before Shut-Offs Were Installed

Incidentally, the installation was completed and the system in use before these suction shut-off valves were installed. At that time, Swaidner wondered what would happen in case of a break in one of the lines. He didn't have to wait long to find out.

An electrode moving around the bend in the horseshoe swung out too far and scraped against one of the coils.

"It had the same effect as a resistance welder," Swaidner recalls. "It just ripped a gash in the coil about a foot long. Because there were no shut-off valves, the operator lost the whole refrigerant charge."

"After we repaired the coil, we plugged up many a filter before we got all the dirt out of the line. That was a real job."

"The dirt seeped into the submerged coils from the acid solution. This was quite a dehydration problem, but with the coil repaired and the tank temperature at 125° F., we were able to do quite well with our vacuum pump. A steam line was submerged to maintain the temperature inside the tank. Actually no other dehydration has been necessary."

It was after this incident that the suction hand shut-off valves were installed. As an additional precaution, timber buffers were built into the tank to protect the coils from any further contact with the electrodes.

Water Used for Rinsing Bath

Not only does the refrigerating system play an important role in the anodizing process, but the coolant water from the condensing unit is used to provide a clear bath for rinsing parts before they leave the plating room.

Hughes and his department have been working with this direct expansion process for eight months. They report that the method shows a great deal of promise particularly in view of its many practical aspects. He emphasizes, however, that until all the "bugs" are ironed out, he prefers the chilled water system.

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Service & Supplies

High Temperature Measured In Units May Open New Field of Study on Sludges

ATLANTA—A statement that temperatures approaching 347° F. have been measured on the valves of household "Freon-12" compressors may open broad new fields of investigation in the field of sludge formation and other phenomena that occasionally occur, according to some engineers.

This was brought out at the 39th spring meeting of the American Society of Refrigerating Engineers here when H. M. Elsey, consulting engineer to Westinghouse, described a method of evaluating refrigerator oils that involves subjecting a mixture of oil and "Freon-12" to a temperature of 347° F. in the presence of iron and copper.

The two metals are those found in a refrigerating system and apparently serve as catalytic agents which make the reactions possible, it was pointed out in the presentation, which Elsey had prepared in collaboration with L. C. Flowers and J. B. Kelley, Westinghouse materials engineers.

Iron in the form of a steel spring clip is used to represent the compressor discharge flapper valve, the tongue of the valve being the hottest spot in the compressor. Copper wire employed in the test, of course, represents that found in the tubing of the system.

What happens under the test, Elsey explained, is that the mixture of refrigerant and oil changes color, the iron darkens, and the copper becomes etched and also changes color.

The degree to which these changes occur varies with the oil being tested and the duration of the test. Measurable results usually occur within a few hours, and if the heating continues long enough, the mixture will turn into a charred mass, it was explained.

Objections to this type of test have been made, Elsey admitted, chiefly on using such a high temperature as 347° F. He pointed out, however, that temperatures nearly that high do occur in a compressor; that higher temperature merely accelerates the reaction but does not otherwise

change the results; and that when the "Freons" were first described back in 1930 by Thomas Midgley, Jr. and Albert L. Henne, these discoverers commented:

"The corrosion characteristics of pure, dry dichlorodifluoromethane vapor at 175° C. (347° F.) are satisfactory with high and low carbon and stainless steels, aluminum, copper, monel metal, tin and tin-lead solders; . . ."

Other objections which have been made, Elsey said, claim that the color change is that of the oil alone in reaction to heat, or the effect of the "Freon-12" on the metal. Similar tests on tubes containing just the oil or the refrigerant and iron, have shown no change in color, however, he declared.

This type of test, he also pointed out, has proved satisfactory for determining oil stability, but does not cover such other important properties as pour point and lubricating quality, for example.

Millsom Heads Sales Of Refrigeration, Cooling For Acme Division

JACKSON, Mich. — R. E. Mercer, director of merchandising for Acme Industries, Inc., manufacturer of air conditioning and refrigeration equipment, announced that Carl Millsom has been appointed sales manager for the air conditioning and refrigeration division. In this capacity he will be responsible for all sales policies of the company in its sales of industrial and commercial equipment to contractors throughout the nation.



C. W. Millsom

The appointment adds additional responsibilities as Millsom also heads Acme's Flow-Cold division, directing the merchandising of its packaged chillers, cooling towers, refrigeration accessories, and the Flow-Temp heat pump through wholesalers, dealers, and contractors.

Canady Joins Palmer Mfg. Co.

PHOENIX, Ariz. — Jack Canady has announced that he has resigned as secretary manager of the Appliance Merchandisers Association here to take the position of national sales promotion manager with Palmer Mfg. Co., maker of evaporative coolers.

Hotpoint Conferences Push Service Training

CHICAGO — To profitably exploit product service as a natural segment of appliance merchandising, distributors and dealers should maintain alert service departments staffed by well-trained personnel.

A competitor can "out-advertise," "out-discount," and "out-giveaway" almost anyone, but the dealer who maintains a courteous, dependable service staff, always ready to help a customer when an appliance needs adjustment, builds a reputation that brings old customers back for repeat sales and pre-sells new customers.

These statements were made by the product service division of Hotpoint Inc. at a series of five regional distributor management meetings held in New York, Chicago, Atlanta, Dallas, and San Francisco.

Over 200 distributor service managers and sales managers attended the "Product Service Opportunities Unlimited" conferences to discuss operating phases of the national service picture, field service, technical developments, and education.

Factory service representatives explained that service on customers' appliances can be a profitable business both in and out of warranty and that service should not be treated as a necessary evil in selling.

John G. Praetz, manager, product service, said that the growth of the white goods industry into the "automatic" field has caused a natural rise in service. This does not mean a decline in appliance quality but rather an increase in the complexity of

product design, he said.

Automatic devices for home or industry are not completely foolproof and should not be sold as such, he said. For top efficiency and maximum customer satisfaction, automatic devices for the kitchen and laundry need periodic "tune-ups" very much like that given an automobile.

A new "progressive educational program" under which distributor product service personnel will conduct educational field activities was outlined. Under this plan, each distributor will hold 10 classes each year.

Using visualcast slides, new advancements in service methods will be explained to service managers attending. Certificates of achievement will be awarded at the end of each session.

Each dealer "student" will be rated A, B, or C. Results of this grading will then be charted on a graph so each distributor can see his operating efficiency.

If attendance or achievement begins to slip on this graph, distributor and factory service staff members can quickly take steps in that market area.

The serviceman, unlike a salesman, gains a welcome entry to the average customer's home, Praetz said. He has an ideal opportunity to learn what appliances the family already owns, which ones need replacing, and what appliance the family wishes to purchase next.

The Hotpoint service manager said that although a dealer may sell only 75 refrigerators a year in his town, he can tap extra profits from the 10 to 15-year backlog of older refrigerators that need service by using this new progressive approach.

Dole Refrigerating Co. Celebrates 25th Year

CHICAGO—Dole Refrigerating Co. is celebrating its 25th anniversary this year, the company announced recently.

Company officials recalled that it was about 1930 that Dole undertook the job of supplying holding cabinets for zero temperature to handle frozen foods for Birds Eye Frozen Foods and Swift & Co. They are still large users of Dole vacuum plates, the company said.

The first Dole plates manufactured are still in use and giving satisfactory service, the firm noted.

One of the first applications of Dole plates was the modernizing of old brine cabinets by installing Dole conversion units. Some of the early ice cream companies to install truck plates in Chicago were Borden, Cunningham (later Borden), Paradise, Swift, and Shedd. The Shedd Co. was one of the first ice cream companies to distribute frozen foods.

C. A. Gruggel Is Moved to Servel Post In New York

EVANSVILLE, Ind.—C. A. Gruggel has been transferred to the Servel eastern regional office in New York as an air conditioning sales representative, according to John A. Gilbreath, assistant vice president in charge of Servel's air conditioning division.

Gruggel first came to Servel as a sales engineer in 1935. He left Servel in 1942 to represent the Republic Aviation Corp. at Wright Field, Dayton, Ohio, during World War II, and in 1948 returned to the air conditioning division at Servel.

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- Air Conditioning Units 1½-20 tons
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What's New

When requesting further information on new products, please use "Information Center" form.

Sink Boring Tool Speeds Garbage Disposer Installation



Garbage disposer unit can be installed in a 15-minute operation with the aid of this low-priced sink boring tool. It is being made available for sale or rent by G-E major appliance distributors.

KEY NO. B-710

ATLANTIC CITY, N. J.—A new low-priced sink boring tool, which makes possible the installation of garbage disposers in any existing sink, was demonstrated here by the General Electric Co. at the convention of the National Association of Master Plumbers.

According to Paul M. Augenstein, manager of marketing for G-E's electric sink and cabinet department, the new tool reduces to a simple 15-minute operation the enlarging of drain

apertures to permit the installation of the disposer.

Augenstein described the tool as a combined scriber and cutter which can be used in combination with any standard 1/2-in. electric drill. Its basic advantages, he said, are speed, ease of operation, portability or lack of bulkiness, and its clean-cutting qualities.

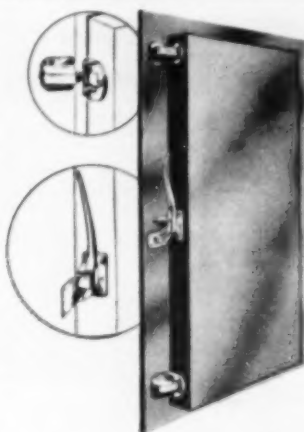
To use the tool, the sink waste line is disconnected from the spud at the bottom of the sink and a centering collar is then screwed on in its place.

A Carbide-tipped scriber is attached at the top to cut through the porcelain coating.

The scriber is then removed, a vertical shaft inserted, and a cutting head attached by a wing nut on the lower end of the shaft. Uniform cutting pressure and steadiness are maintained by a tension spring and tripod, respectively, it is claimed by the firm.

When the drill is connected, the circular cutting head cuts a smooth hole upward from the underside of the sink.

The new tool will be stocked by all G-E major appliance distributors who will sell or rent it to qualified plumbers for the installation of General Electric food waste disposers.



Kason Trigger Latch Fits Super Freezer Doors

KEY NO. B-711

BROOKLYN—A new Edgemount super freezer latch for doors of 4-in. offset or greater has been introduced by the Kason Hardware Corp. here.

Features of the new latch include: trigger action mechanisms which constantly apply pressure over the entire surface of the door; adjustable strikes for ease of adjustment during installation and for take-up after prolonged wear of gasket; lever activated outside handle, and new type inside handle.

An inside safety mechanism available where latch requires padlocking permits opening of the freezer door from the inside.

Low-Priced Chrome Bar Stool Added by Bianco

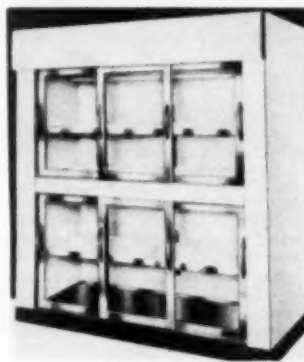
KEY NO. B-712

ST. LOUIS—A low-priced chrome bar stool is the new addition to the seating equipment put out by Bianco Mfg. Co. here.

The bar stool is built of 16-gauge cold rolled triple plated tubing. It has a 2-piece top, upholstered in Duran over 2 in. of rubberized hair. It lists for \$11.90.



Wall Refrigerator Has Electric Defrost Timer



KEY NO. B-713

YONKERS, N. Y.—Frigid Igloo Mfg. Corp. here has announced a full-vision wall refrigerator with automatic electric defrost timer.

The refrigerator is designed for the display of milk, dairy products, delicatessen items, and beverages.

Features listed are acid-resistant vitreous enamel porcelain front, interior, shelves, and bottom; fluorescent interior lighting; double Thermopane "easy glide" doors with stainless steel trim, stainless steel tracks and jambs, chrome molding for price markers, and heavy-duty coils top and bottom, ready for unit hook-up.

The refrigerator is available in 54-in., 72-in., 96-in., and 138-in. lengths.

Deep Well Pump Useable Horizontally or Vertically

KEY NO. B-714

DECATUR, Ill.—Design of a new Burks deep well pump manufactured by Decatur Pump Co. here permits the unit to be used either in a horizontal or vertical position, without any mechanical changes, depending on the type of installation desired, the company announced.

Patented "Kam-Action" impeller-volute combinations are incorporated in this H-V series for increased capacity. All sizes, which are available through 1 hp., have heavy duty motors. Capacities up to 1,500 g.p.h. and depths to 130 ft. are claimed.

A special air vent is built into the pump for easier priming and serves to bleed off air and gas from the case, the company explained. It said the pressure switch is designed to prevent the diaphragm from becoming clogged with sediment, "eliminating one of the main causes of switch trouble." All units are equipped with a patented non-chattering control valve.

A one-piece solid stainless steel shaft is claimed to eliminate misalignment of motor and pump and the solid bronze impeller is balanced for smooth performance. The pump case contains a renewable volute.

Educers for both one-pipe and two-pipe installations are available and a complete line of well caps, both for installing the pump directly over the well or for off-set installations are offered.

Specifications, performance tables, and accessories are contained in the Burks H-V bulletin.

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now offers
the **LAST** word
in a
Frozen Food
**STORAGE
CABINET**
19 cubic
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Features Large Door That Reveals Over 93%
of Front Area of Interior. Has No Blind Areas
... No Wells. Entire Contents Immediately
Available When Door Is Open.

INSIDE AND OUT—MODEL NO. 1001
IS CONSTRUCTED TO GIVE PEAK REFRIG-
ERATION UTILITY! CHECK THESE FEATURES FOR
DEPENDABLE, ECONOMICAL STORAGE OF FROZEN FOOD:

- ✓ Holds 670 lbs. of frozen foods
- ✓ The correct temperature—0° F.
- ✓ Full 4-inch correct density glass fiber insulation.
- ✓ A refrigerator that keeps 0° F. under heavy loads.
- ✓ High-baked white Dulux finish inside and out.

- ✓ Large refrigeration plates assure even temperatures.
- ✓ All steel welded construction.
- ✓ Four plated wire shelves, with seven adjustment positions, for economical, space saving storage of commercial and other large packages.
- ✓ Rugged, properly-sized hardware, with keyed cylinder-lock in the fastener.
- ✓ Self-contained and therefore portable. Can be moved anywhere in establishment.

THIS IS IT! A brand new KOCH item for EXTRA PROFIT in a new field: a storage cabinet for use in restaurants, hotels, markets, bakeries, institutions, and all kinds of other establishments where the storage of frozen commodities is a problem. Get in on the first selling scoop! Get the complete story NOW! Write:

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What's New (Cont.)



**New 'Sodamaster' Unit
Uses 'Jet Recirculation'**

—KEY NO. B-715—

CANFIELD, Ohio—A self-contained, multi-flavor beverage dispenser, utilizing the new, patented "jet recirculating" principle to carbonate ordinary tap water, is now being manufactured by Carbonic Dispenser, Inc. here.

The new unit, trade-named "Sodamaster," with a peak period capacity of up to 1,900 drinks, is equipped with a special three-lever, self-cleaning master faucet that offers fingertip selection of any three carbonated beverages desired, plus continuous supply of supercharged soda water and jet stream, according to the company.

Syrup tanks, carbonator, and refrigeration equipment are incorporated inside a compact cabinet, finished in dove grey "Hammerloid," and parts contacting liquids are made of stainless steel.

Sodamaster dispensers are available in several different sizes with single or multiple faucets.

Pur-O-San Extra Treats Water Used In Condensers

—KEY NO. B-716—

BRADFORD, Pa.—The Pur-O-San Co., a division of Bradford Chemical Co., announces "Pur-O-San Extra" for treating water used in heat exchangers and condensers.

According to company officials, extensive field and laboratory tests have proven Pur-O-San Extra to be readily soluble and providing full protection regardless of the characteristics of the water used.

Officials state that for best results it is first recommended to clean the entire system by circulating Pur-O-San Extra through the system to remove scale, sludge, and other similar soft deposits.

This process will de-scale heat exchangers without dismantling and reassembling.

When added to water, Pur-O-San Extra is readily soluble, non-toxic, non-volatile, heat-stable, and eliminates free oxygen. It protects against corrosive attack by adsorbing at metal surfaces in the form of a thin, impervious film, thereby preventing contact between corrosive elements and metals.

This film barrier retards thinning of tube walls. It does not change the clearance between baffles and shell.

gauge steel. All seams are vapor sealed to prevent moisture infiltration. Fiberglass insulation is used. Panelite breaker strips around the door have a heating unit behind the strip to eliminate condensation and ice formation. A thermostatic control is also added.

Friedrich 'Bottle Box' Has Jet Black Porcelain Case



—KEY NO. B-718—

SAN ANTONIO—Finished in jet black porcelain and trimmed with polished aluminum, an 8-ft., self-contained dry bottle refrigerator is being produced by Friedrich Refrigerators, Inc. here.

Capacity of the new "Bottle Box," model BB88, is normally 30 cases, but it will accommodate a maximum of 32 cases, according to the manufacturer.

Friedrich pointed out that the black porcelain case makes the refrigerator usable equally well in supermarkets, neighborhood stores, and delicatessens—and in clubs and bars.

Outstanding advantage offered by the Bottle Box is said to be the "FloatingAir" principle of refrigeration "which maintains stored bottles in dry, clean, easy to handle condition, and keeps labels intact."

Other features of the model include: porcelain bottle racks, shelves for frosted glasses, fiber glass insulation, vanishing sliding doors of hard rubber, four 18-in. door openings, and bottle cap opener and catcher. The accessible hermetic compressor slides out for service.

Cheese Keeper Featured In New Philco Refrigerator



—KEY NO. B-718—

PHILCO HAS INTRODUCED a new "dairy bar" refrigerator. An 8.7-cu. ft. model, it features a cheese keeper which is said to keep cheese "dairy fresh" for several weeks. Priced at \$399.95, it is designed in the Key Largo color and has automatic defrost.



**Jordan 20-Cu. Ft. Upright
Has 4 Freeze Plates**

—KEY NO. B-717—

PHILADELPHIA—A 20-cu. ft. upright home freezer that holds more than 700 lbs. of frozen foods has been introduced recently by the Jordan Refrigerator Co. here.

The "Twenty" as the unit is called, features four Freeze-plate shelves that permit nearly all frozen food to be in direct contact with sharp freezing surfaces.

It has a 1/2-hp. hermetically sealed compressor unit with 5-year warranty. The compressor unit is mounted on special slide out tracks for inspection and servicing.

The freezer has a polished aluminum interior and five ice cube trays. The exterior is finished with an extra hard Hi-Baked Bordenized enamel. A chrome handle has a built-in lock. Construction is all welded heavy

G-E Automatic Washer Can Handle Synthetic Fabrics

—KEY NO. B-7110—

NEW, FULLY AUTOMATIC washer which has special control flexibility to permit washing of synthetic fabrics such as Orlon, Dacron, and nylon has been introduced by General Electric Co. The washer is a top-loading, free standing machine which requires no bolting to the floor. Unit, which retails for \$349.95, carries a one-year warranty.

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"Taste-Master"
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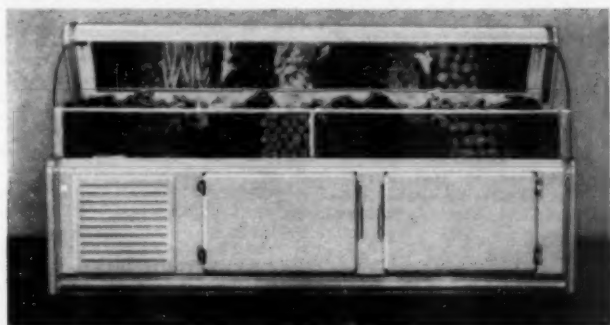
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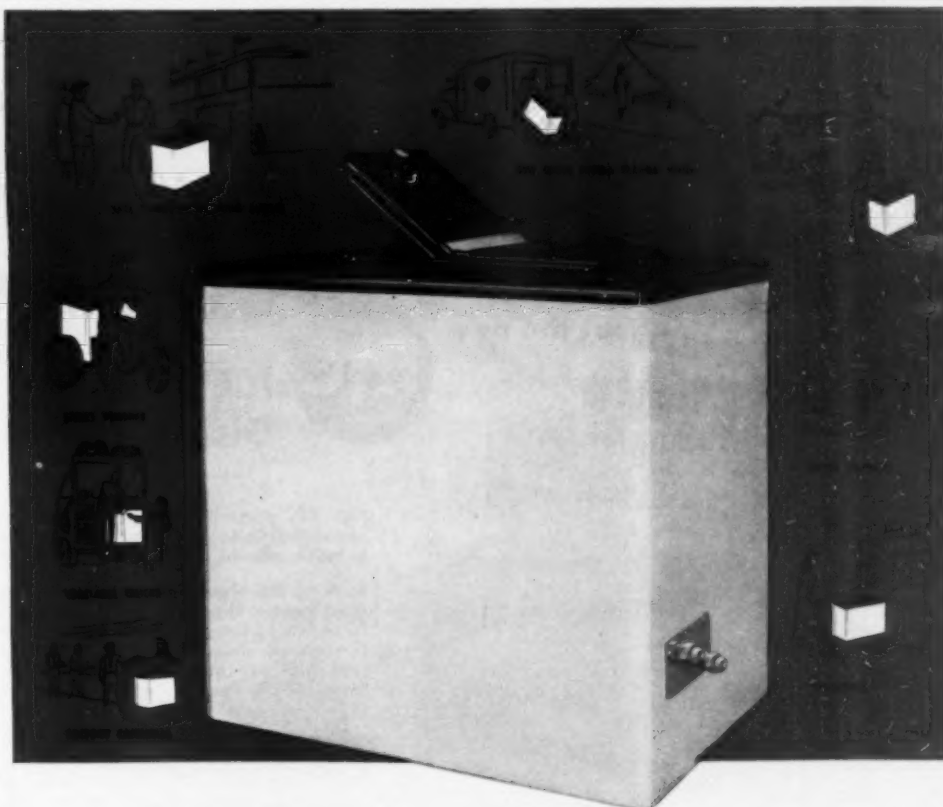
WARREN MODEL COUS PAYS BIG PROFITS



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Stores that have installed the Warren COUS report it is a

small investment for its value in stepping up so drastically sales and profits of produce, dairy products, or packaged meats. For free literature in full color, address Warren Refrigerators, Atlanta 1, Ga.



NOW! mobile refrigerated vending without dry ice

in the HOLD-OVER Vending Cabinet

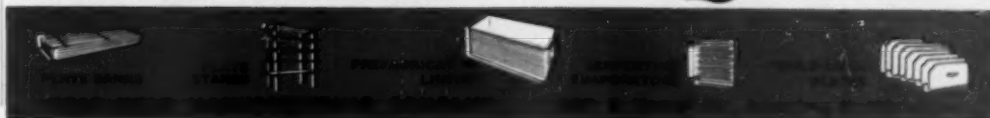
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You can mount a "Hold-Over" Vending Cabinet on a motor scooter or as a side car to a bicycle for street vending. You can deliver it by pick-up truck to corner vending stations for specific picnic groups, ball games or other sporting events. You can provide facilities for the transportation and sale of ice cream and frozen foods on non-insulated trucks and on trucks equipped only for medium temperature operation.

Send today for descriptive literature and prices.

KOLD-HOLD

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'CASE FOR LICENSING NOT PRESENTED IN REPORT OF N. Y. HEARING' SAY CONTRACTORS—SO HERE IT IS

The Refrigeration & Air Conditioning Contractors Association, Inc., 154 Nassau St., New York City, N. Y.

Editor: Notwithstanding published news accounts to the contrary, refrigeration contractors licensing in New York City is definitely not a dead issue.

I am sending you a copy of the presentation made by the Refrigeration & Air Conditioning Guild, Inc., favoring licensing, to the New York City Council at the public hearing. It is officially documented and cited.

The other side of the story was given all the publicity. They represent a lot of money, something our contractors do not have. They did not present any proof in their argument, they merely made statements. Therefore, I think that you should publish at least a part of our presentation.

We can be convinced that licensing is the wrong program, but to date the opposition has not proven it by any facts, but have merely said "no" to everything that has been suggested with an afterthought that they are now working on a refrigeration code to be presented at some time in the future to the Council.

NATHAN ERLSTEIN
Executive Vice President.

(Editor's Note: The following is a condensed version of the presentation by the Refrigeration & Air Conditioning Guild, Inc., seeking favorable action on a proposed bill for licensing refrigeration and air conditioning contractors in New York City).

Part of Presentation to N. Y. City Council

"Refrigeration and air conditioning today rates among the largest industries in the world, and is increasing in size so rapidly it is becoming a vital factor in the economic well-being of the nation. Because of this its installation and servicing phases—the backbone of the industry—has not maintained the high standard of responsibility in craftsmanship and care that the industry requires.

"The amount of damage to property running into thousands of dollars as well as injuries to persons warrants a careful analysis of the problem, and the necessary legislation to deal with it. The Gas Refrigeration Contractors Association and Refrigeration and Air Conditioning Guild, Inc., the local affiliate of the

National Refrigeration and Air Conditioning Contractors Association, Inc., has made that analysis and is in favor of the passage of Bill No. 524 as representing a real contribution to the field.

"Listening to the opposition, No. 524 will only be passed when and if there will be a serious accident, something 524 is attempting to prevent.

"There is now a safety code in the Fire Department under Section C19-98 which should be revised to conform to the new ASA-BB Code which has been previously approved by the whole industry. We are interested only in the administrative section of this local law. We are interested in licensing refrigeration contractors on all levels including domestic, commercial and/or industrial refrigeration.

"It seems a bit ridiculous to find most all other industries well licensed and many not as important as the refrigeration industry. For example, barber and beauty shops are licensed in the State of New York. How can that compare to the saving of life and property in refrigeration?

"The licensing code will eliminate the 90-day wonders—the know-nothings, and those with no refrigeration and mechanical aptitude.

"In New York City, anyone possessing a wrench or flaring tool can, and unfortunately does tear into the public's refrigeration and air conditioning systems. It is not necessary that he be able to read and understand the technical complicated provisions of the safety code now incorporated under C19-98. It is not necessary that he be a skilled, careful, and capable technician, a morally responsible entrepreneur, a financially responsible businessman. For that matter it is not necessary that he

possess any knowledge whatsoever of refrigeration and air-conditioning, nor have any financial stability. The field is open to all.

"It is no wonder then that we have refrigeration and air conditioning accidents resulting from breakdowns in the system—breakdowns which should never have taken place if the machines were properly installed in the first place or, once installed, properly maintained. T. R. Hardin and A. J. Phillips, chief engineer and assistant chief engineer of the Boilers' Div. of Hartford Boiler Insurance Co., respectively, analyzed 200 refrigeration accidents caused by pressure vessels which resulted in contamination of food and losses of thousands of dollars. They pointed out that 21.7% of the accidents analyzed were traced to pure carelessness.

"Property damage of this kind has been so great that insurance companies simply refuse to write insurance for businesses in the food, flour, and butchering lines where contamination or spoilage may occur through defective refrigeration and air conditioning systems. And this is true despite the fact that insurance rates are high.

QUOTE INSURANCE EXECUTIVE

"John Henrich, New York City general manager of the Hartford Steam Boiler Inspection and Insurance Co., reports, 'As a general policy, we will not accept applications for insurance covering refrigeration of food, meat, etc., because of our great losses due to constant breakdown in refrigeration and air conditioning systems. Our experience has been that there have been so many accidents in New York that our contamination cases run too high for profit.'

"A letter from The Fishery Council states:

"The Fishery Council wants to go on record as favoring the amendment your Guild proposes to add to the administrative code of the City of New York in relation to issuing licenses to master refrigeration contractors engaged in installing, repairing, servicing, and maintaining refrigerator systems. Since the majority of our 100-odd members in the Fulton Fish Market and elsewhere in New York City employ refrigeration to store their merchandise, it is of paramount importance to us that they get reliable service for their equipment. We hope that your Guild succeeds in its plan and know that such change in the law will be of immeasurable value."

"Just a few months ago, the Fulton Fish Market had a breakdown in its cooling system, causing spoilage and property loss in the thousands of dollars. The fire marshal of the City of New York has in his files fires caused by improperly repaired or installed refrigeration equipment.

"However, the more serious injuries to life and property occur when the breakdown results in explosion, fires, and the release of noxious gases." (Hereinafter follows a recounting of newspaper reports of accidents caused by faulty refrigeration systems.)

HAVE IT IN PLUMBING FIELD

"The situation of destruction and appalling irresponsibility found today in the refrigeration and air conditioning fields can be compared to the situation in the electrical and plumbing fields in the early part of the century.

"There was the same type of opposition then to proposed legislation as there is to the present bill. They argued that the situational dangers cited were exaggerated, that the bills would so increase the cost of plumbing and electrical work, that building would be restricted and legislation could not modify the human factor of carelessness.

"Yet in spite of the pleas of the opposing favored few who were more concerned with immediate increased costs to themselves, than to the waste in property and human lives, the Plumbing Code was overwhelmingly approved by the Board of Aldermen on Nov. 10, 1914 and the Electrical Code was similarly approved on July 6, 1915.

"In retrospect, gentlemen, after years of experience with the application of these aforementioned codes, is there anyone here who can responsibly say that the establishment of those codes and practices were unnecessary and too burdensome?

"Of course not, and Bill No. 524 modeled after the electrical and plumbing codes is simply trying to do the same kind of a job. The Safety Code now in existence in the Administrative Code of the City of New

York, under Fire Department Bureau of Combustibles, Article 18, Section C19-46 is not changed but implemented. Local Law No. 524 proposes that contractors who install and maintain refrigerating and air conditioning equipment be licensed, and as precondition to licensing, an examination of qualification be had. This is no attempt to restrict the field to anyone except incompetents.

LICENSE CONTRACTORS, NOT SERVICEMEN

"Licensing fees will only be such as to finance the administration of the code. The contractor, rather than the serviceman is to be licensed as a practical administrative measure. It is a more practical and simple proposition to control 800 contractors than 8,000 to 10,000 servicemen.

"The licensed contractor would be responsible to the City of New York as well as to his customer should he fail to live up to the provisions of the licensing code. Licensing would then allow the practice of refrigeration and air conditioning installation, service, and maintenance to those persons who are trained.

"In the main, opposition to the bill stems from large users of refrigeration, food chains, giant corporations; in other words 'Big Business.' But where is the protection for the hundreds of thousands of small business men, such as the retail butcher, baker, delicatessen, and candy stores? There has never been a licensing code established in any area of the commercial world that hasn't faced these arguments.

"The need has been seen in other parts of the country. Whereas the City of New York, a leader in all types of legislation has been lax in protecting its citizens in this matter, the fact that the need was so recognized in other parts of the country, is established by the number of cities which have passed such a bill.

LICENSING IN OTHER CITIES

"A survey to discover whether there were contractor licensing codes in cities of the United States was sent out. The survey showed that there were 25 to 35 cities in the over 100,000 population class that had refrigeration codes and that there were about 10 in the under 100,000 population class that had such codes. We find similar bills in Detroit, Minneapolis, Oklahoma City, Dayton, Hammond, Ind.; Cleveland, St. Louis, El Paso, Texas; State of California; Grand Rapids, Mich.

"Certainly the experience achieved in those cities did not confirm the fears voiced by the present opposition. On the contrary, John C. Rehard, former chief engineer of the Refrigeration Safety Department of the City of Detroit, and responsible for the supervision of Detroit's licensing code passed in 1937, states that:

"Unscrupulous individuals making unsafe and otherwise faulty refrigeration installations have jeopardized human life and caused needless expense trouble. The more respectable refrigeration contractors themselves recognized the problem confronting the public and played a very definite part in the proposal to license contractors as a means of eliminating the difficulty. Consequently, our first contractor refrigeration licensing provisions in the City of Detroit were passed in 1937, as a result of the clamor for safety, better and more reliable refrigeration installation," he points out. "The effect of our licensing provisions has been to produce a better, safer, and more uniform quality of workmanship. In addition the 'gyp artist' and the excessive expenditures to customers they caused, have, at least to a certain extent, been eliminated. It has also insured a far higher safety factor through a more reliable group of individuals as contractors and has in general, made for a safer city."

"To conclude, the benefits derived from licensing are:

"(a) The general public will be assured of a higher standard of workmanship.

"(b) The Safety Code now law, will be more efficiently complied with and enforced and not as heretofore.

"(c) It will result in elevating the refrigeration contractor in the eyes of the consuming public.

"(d) It will enable the legitimate contractor to know that his competition has complied with a minimum set of quality standards.

"(e) It will weed out certain undesirable and control the caliber of those entering the business."



about the new



ICE CREAM Display Case



MODEL 555310-4D Features superstructure and 3-dimensional picture. Cabinet and superstructure are fluorescent-lighted. Height: 58".

Now BTC presents a new ice cream merchandiser—one styled from top to bottom to make sales for you and your customers!

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SPARKLING GLASS FRONT Quadruple Thermopane glass front can't be beat for building up ice cream sales!

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Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Booklet Tells How To Sell To Defense Contractors

—KEY NO. N-710—

WASHINGTON, D. C. — How to sell to companies holding defense contracts is outlined in a booklet "Subcontracting for Defense" recently issued by the Chamber of Commerce of the United States.

The 36-page publication indicates the sources to which manufacturers may look to obtain leads. Also, it suggests ways of looking ahead for subcontract opportunities that will develop as the defense mobilization program goes forward.

Subcontracts will be let, says the manual, to those able to convince prime contractors of superior ability to produce articles difficult to make.

Copies are available from the Chamber of Commerce of the United States at 50 cents per copy.

New Commercial Catalog Published by Cory Corp.

—KEY NO. N-711—

CHICAGO—To provide new and complete specification and price information for its commercial equipment distributors and food service customers, Cory Corp. here, maker of automatic pushbutton coffee brewing systems, grinders, and other equipment, has published a new 8-page commercial catalog and price schedule.

ReSeal Cushion REPLACEMENT GASKET

Restores Original Appearance and Efficiency Without Replacing the Entire Gasket. Easily Installed.



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Tapered design of undercut lip applies permanent pressure against the web of old gasket forming a tight, dirt-free seal.
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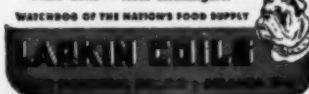
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Efficient operation makes a product easier to sell on one hand; builds solid customer satisfaction on the other. Precision engineering—only the best materials—skilled craftsmanship—and almost 25 years experience in commercial and industrial refrigeration—all add up to higher efficiency for every Larkin product. And this means lower operating costs — important to buyer and seller alike.

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There are two editions—one for use by commercial customers and the other for Cory's distributors.

Both editions carry price and specification data on every Cory commercial product, repair and replacement part, and accessory. In addition, there is template information for use by architects in designing coffee purveying space for restaurant, commercial, and institutional installations. An added extra feature is a section devoted to domestic product information for the commercial user.

Armour Booklet Gives Data On Self-Service Meats

—KEY NO. N-712—

CHICAGO—The fifth annual study of self-service meats conducted by Armour & Co. is available in book form upon request to the Marketing Research Department of the firm.

The 28-page booklet is intended to provide meat retailers with factual information on the latest self-service developments. Statistics on the number of stores handling self-service is included.

Sturtevant Catalog Tells How To Put Air To Work

—KEY NO. N-713—

BOSTON—A reference file of Westinghouse products for air handling, air cleaning, and air conditioning for manufacturing plants was issued recently by the Sturtevant Div., Westinghouse Electric Corp. here.

In addition to condensed data on Westinghouse - Sturtevant products, the book also describes and illustrates the various ways in which air can be put to work and contains a section of frequently used reference data, charts, and tables.

The book is labeled Catalog 600.

Copeland Issues Condensed Catalog on Copelametics

—KEY NO. N-714—

SIDNEY, Ohio—A condensed catalog of Copelametic units for 1952 has been issued recently by the Copeland Refrigeration Corp. here.

The six-page catalog covers remote air cooled, remote water cooled, self-contained air cooled, self-contained water cooled, combination air and water cooled remote, extra low height self-contained, and truck models.

Specifications and capacities are shown in tabular form.

Booklets Give Soft Water Facts for Home, Farm

—KEY NO. N-715—

ASHLAND, Ohio—Complete facts on soft water and how its use in the home and on the farm can pave the way for better living are illustrated in two new booklets prepared by The F. E. Myers & Bro. Co. here.

The booklet, "What Everyone Should Know About Soft Water," is a factual report on the benefits of soft water—how it saves money and makes living more pleasant. This booklet lists the causes of hard water, its disadvantages, and how the use of soft water can save the average family \$100 or more a year.

The booklet, "Soft Water Is Needed On the Farm," shows the farmer and the farm wife how soft water can bring about better production on the farm and better living in the house. These free booklets are available

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Coil Bulletin Includes Sieromatic Charts, Rule

—KEY NO. N-716—

ST. LOUIS—The Mario Coil Co. offers a brand-new cooling coil bulletin on the complete line of Mario cooling coils for direct expansion refrigerants, circulating water, and brine. It gives design, construction, and dimensional data plus psychrometric charts.

In addition, to enable you to make coil selections in a matter of seconds, the exclusive Mario Sieromatic charts and rule are included.

Book Digests Information On Convention Locations

—KEY NO. N-717—

NEW YORK CITY—A Digest of Convention Locations has been issued by the Hotel Educational Bureau.

This 52-page booklet, which was produced with the cooperation of a national group of resorts and hotels, is the first of its kind in the field.

One page is devoted to each hotel. It presents complete and pertinent data covering convention facilities, with a general description of the locale of the hotel, recreational facilities, meeting room and banquet facilities, liquor facilities, convention season, sleeping accommodations, rates, and transportation data.

Opposite the front cover is a description of convention services, and on the inside back cover is a three-year calendar with holidays.



E. T. Brooks



C. C. Armstrong

Frigidaire New Orleans Branch Promotes Brooks; Armstrong Replaces Him

NEW ORLEANS—F. B. Hartney, New Orleans branch manager of the Frigidaire Sales Corp., has announced the appointment of E. T. Brooks as appliance sales manager.

Brooks has been associated with Frigidaire for the past 17 years. During that time he was connected with the service department and in 1936 was appointed service manager and held that position until 1940.

For the next five years his responsibility was that of building the commercial dealer organization throughout Louisiana, Florida, Mississippi, and Alabama as a division manager for all Frigidaire commercial products. In 1945 he was promoted to commercial sales manager, a position which he has held until the present time.

It was also announced that C. C. Armstrong would replace Brooks as commercial sales manager. Arm-

strong has been with Frigidaire for 15 years and began his career as a commercial and air conditioning engineer for the branch office in Des Moines, Iowa.

During the last war he was called to the home office in Dayton, Ohio, and for two years was associated with the process engineering department in connection with production of vital war materials.

Since 1944 he has been with the New Orleans office as district engineer and division manager, for both appliance and commercial products, it is pointed out.

Wycoff, Ex-Football Star Named Wright Sales Mgr.

ATLANTA—Max Wright, Inc. here, which handles domestic and commercial air conditioning equipment, has announced the appointment of Doug Wycoff as sales manager.

A one-time Georgia Tech football star and the only athlete at the school to win a letter in four major sports, Wycoff was formerly associated with United States Oil Co. He formerly operated his own air conditioning business.

Wright supplies evaporative coolers and refrigerated air conditioning equipment to Georgia and other southeastern states.

A & P Market Air Conditioned

MEMPHIS—The A & P Supermarket at 1578 Lamar, this city, has been air conditioned. It was announced by Manager Clonus Palmer.

Having troubles, "Doc"?



Rx Replace with Serwel Supermetic



Authorized Serwel Wholesalers everywhere are ready to offer you quick over-the-counter assistance on every installation requirement.



SUPERMETICS AND GENUINE SERVEL PARTS ARE AVAILABLE EVERYWHERE

Here's a tried and proven remedy that provides a quick cure for hot weather refrigeration troubles:

RECOMMEND SERVEL—Please your customers — Pocket a good profit that's yours to keep on every installation.

Why spend valuable time repairing a worn-out compressor when there's an opportunity **RIGHT NOW** to sell a new condensing unit? Serwel Supermetic is a precision-built Hermetic, made to stay on the job and designed to eliminate costly call-backs. Sell a **SUPERMETIC** next time you have a replacement installation.

USE SERVEL SUPERMETICS— $\frac{1}{4}$ to 3 H.P. for air-cooled, water-cooled, medium or low-temperature applications. Simple to install, easy to check. Electrical accessories and interconnections completely assembled. Low-cost Serwel factory-backed warranty protects your profits.

Serwel SUPERMETIC

Models for every commercial refrigeration and air-condition use... $\frac{1}{5}$ to 5 H.P.

SLANTS ON SERVICE

"Slants on Service" is a "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.

Controls Rated on Locked Rotor Current, Not Hp.

The reason the control industry uses motor current ratings rather than horsepower ratings is because different types of motors have such wide variations of current requirements for starting and for running at full load, points out the Service Information Div. of White-Rodgers Electric Co.

Here are how these same control ratings apply when the controls are to be used with power-consuming devices other than motors.

The current-consuming characteristic of electric light bulbs is much like that of motors. A light bulb will draw about 10 times as much current at the instant the switch is closed than it will draw a fraction of a second later when the bulb burns.

When using a control on a system having 115-volt light bulbs as the source of heat, be sure that the total wattage of the bulb, divided by 12, does not exceed the Locked Rotor Current rating of the control.

For example: 10 bulbs, each 100 watts, have a total wattage of 1,000. Divide this by 12 and you have 83 amperes starting current.

A relay must be used if the start-

ing current of the lamps exceeds the Locked Rotor rating of the control. The control current rating is shown on the inside of the control case and in the literature.

Electrical heater elements draw approximately the same amount of current at the instant the switch closes as they do after the heater has warmed up. Thus, electric heaters are considered to have a one-to-one ratio of starting current to running current.

When using controls with electrical heaters, make sure that the current the heater draws does not exceed the control rating shown under "heater rating" in the catalog or "ampere rating" shown on the control. If the current is greater than the control rating, use a relay of required capacity.

Dental Mirror Useful In Locating Leaks

A good mirror for finding leaks and looking at the back of fittings and joints is a dental mirror. There are many mirrors on the market but a dental mirror magnifies and you will find it handy in locating those hard-to-find leaks.

Fiberglas Increases Pipe Insulation Density

TOLEDO—An increase in the density of Fiberglas preformed pipe insulation has been announced by Owens-Corning Fiberglas Corp.

Compared to its predecessor product of lesser density, the new product is described by Owens-Corning engineers as being firmer and more rugged, with greater ability to withstand the type of handling encountered in normal applications.

Despite the increased density, the new product retains its lightweight qualities. Cutting and application are easy, Fiberglas engineers point out. Fiberglas pipe insulation does not cause corrosion and is not affected by moisture. It is odorless and provides no sustenance for insects, mold growth, or vermin.

The insulation has high thermal efficiency because minute, still air pockets—formed between the fine fibers of glass—provide high resistance to heat transmission.

The product is furnished in hemicylinders, 3 ft. long, for pipe sizes ranging from 1/2-in. copper tubing through 12-in. iron pipe.

Three types of jackets are furnished for the product. They include: (1) A close-weave muslin cloth which minimizes the amount of paint required after application.

(2) A vapor resistant, foil-laminated type which makes the insulation suitable for use on dual-temperature and refrigerated lines.

(3) A heavy waterproof roofing felt for use on outdoor installations. Jackets for the hemicylinders are factory applied. Those for segmented insulation are shipped separately.

BASIC REFRIGERATION CONTROLS

By Service Information Division,
White-Rodgers Electric Co.

15—Timer and Thermostat Provide Defrost Control

Low pressure controls for defrost have been used for a long time. As we know, there is a direct relationship between the pressure of a refrigerant in the system and the temperature in the evaporator coil. This fact is shown on a refrigeration pressure-temperature chart.

A pressure control incorporates the use of an electric switch that is wired in the condensing unit motor circuit. By properly adjusting the differential between the cut-in and cut-out settings of the control, the refrigeration condensing unit will shut down when the low pressure setting of the control is reached. This will be the lowest temperature point of the evaporator, as based on the control setting.

When the refrigerant temperature rises due to the heat absorbed by the evaporator and system, the pressure will rise. The pressure control will start the refrigeration unit at the high, or cut-in setting, of the control. This will establish a cooling cycle. A period of defrost occurs on each off cycle. The rise of temperature surrounding the evaporator creates the defrost.

While we know that pressure controls have been used for defrost operations for a long time, we do not feel that the full benefit of defrost can be derived from the use of pressure controls alone. There is no way for the pressure control to sense that a frost bank has been built around the evaporator. Further, there is no way of definitely timing the period of the defrost, where a pressure control is used.

Unless the system is definitely operating within a range that is close to, or above freezing temperature, you cannot always be assured that you will get a good defrost cycle of sufficient length to melt the frost which has accumulated on the evaporator where pressure controls are used.

Any efficient defrost system must be so designed, and so timed, that the defrost period will be great enough to take the frost off of the coil, but will not be so great, or of such a design, that it will cause an appreciable rise in temperature in the refrigerated space, which in turn would affect the stored produce.

The defrost timer shown in Fig. 26 incorporates the use of a clock that

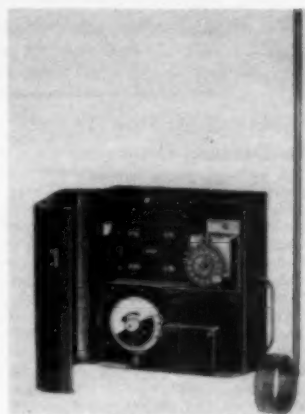


Fig. 26 is a standard defrost timer that incorporates thermostatic control. Cover has been opened to show mechanism.

is electrically driven and that has contacts that can be set to start and stop a condensing unit. Also incorporated in this timer you will find a thermostatic control that is used to maintain temperature in the box.

This is perhaps one of the most simple types of defrost timer that has been developed. In setting the defrost period, it is necessary that the off cycle be of sufficient length of time to completely defrost the coil. In this instance, you are relying upon a rise in temperature in the refrigerated area to give you the defrost action.

When the defrost timer calls for a period of shut-down, it takes command away from the thermostatic control. After the defrost period has been completed, then the thermostatic control takes over to maintain the temperature in the refrigerated space.

(To Be Continued)

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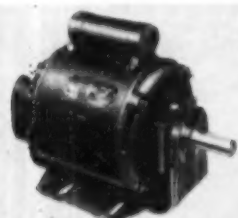
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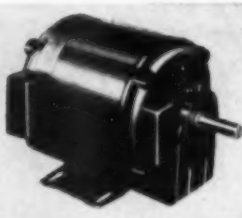
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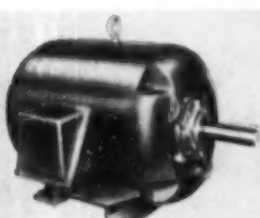
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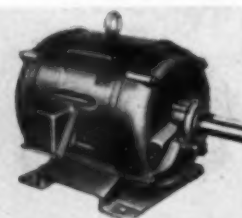
TYPE BR—Capacitor Start Induction. For single-phase general purpose applications requiring high starting torque—normal starting current. Economical to maintain... requires minimum servicing... free from vibration and noise... gives years of service. 1/2 to 3 hp.



TYPE BA—Repulsion-Start Induction. For general purpose applications with high starting torque—low starting current. No other single-phase motor has its ability to continuously start heavy loads, or to stand up under long and frequent starting periods. 1/2 to 15 hp.



TYPE CP—Totally Enclosed Fan-Cooled Motor. Fully protected against filings, steel chips, grit, abrasives, or fumes. Requires no maintenance other than periodic lubrication. Also available in explosion proof type HP. 1 to 350 hp.



TYPE BP—Open type Polyphase Squirrel-Cage Motor. Steel frame—completely drip-proof in any horizontal position, in frames 336 and smaller—available with either sleeve or ball bearings which may be relubricated when necessary. For all general purpose applications. 1/2 to 400 hp.

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Problems In Piping

Numerous Factors To Be Considered In Designing and Installing Hot Gas, Liquid, Suction Lines Outlined at ASRE Meeting

ATLANTA — "A refrigerant compressor is a gas pump and not a liquid pump," summarized C. W. Leegard of General Electric Co.'s air conditioning division in a discussion of refrigerant piping fundamentals for "Freon-12" and "Freon-22" systems at the spring meeting of the American Society of Refrigerating Engineers here.

As general rules he also recommended that liquid refrigerant with little or no flash gas should reach the metering device; excessive oil trapping and pipe vibration should be avoided in the discharge line; refrigerant vapor must be returned to the compressor with entrained oil so the machine will not be damaged or robbed of oil; refrigerant must be properly controlled to the cooling coil both during the "on" and "off" cycle.

In the paper, which had been prepared with the late Wayne E. Dodson of G-E, Leegard pointed out that "problems of oil return and traps in the line are not a source of trouble in liquid lines as they are in suction and discharge lines because the liquid refrigerant and oil are miscible in 'Freon' systems."

Oil and Refrigerant Will Mix

"In other words, the oil and refrigerant will mix in all proportions and will not become separated while the refrigerant is in a liquid state."

With the liquid line, however, there is the problem of insuring that liquid refrigerant reaches the metering device at the coil "with at least 1° of subcooling," Leegard said. "Presence of flash gas or vapor in the liquid line will materially reduce the capacity of the expansion device, such as an expansion valve, and will therefore cause erratic control of the liquid entering the cooling coil."

Liquid flashing, he explained, is generally the result of a decrease in refrigerant pressure due to line friction and static head. Capacity combined with size and length of liquid lines affect friction pressure drop.

"This pressure drop should be kept below 5 p.s.i. Pressure loss due to elevation depends on the difference in level between the expansion valve and the receiver and the density of the refrigerant used."

"At normal liquid line temperatures," Leegard said, "the static pressure loss will be 0.55 p.s.i. per foot of head with 'Freon-12' and 0.50 p.s.i. per foot of head for 'Freon-22'."

When the refrigerant metering device is no more than 15 ft. higher than the liquid receiver, 10° F. of liquid subcooling will prevent flashing of the liquid refrigerant, he indicated. If this distance ranges between 15 and 30 ft., operating head pressure of the unit generally has to be increased without boosting liquid temperatures proportionately while larger lines are used to cut friction losses.

Heat Interchanger Between Liquid, Suction Line

Heat interchangers between the liquid and suction lines will be advisable, he suggested, when more liquid subcooling is required than can be obtained in the condenser. For greatest efficiency the interchangers should be close to the evaporator.

"Systems with long vertical liquid upfeed lines should be avoided since they are less efficient and often require abnormal service," suggested Leegard.

Regarding discharge or hot gas lines on compressors with remote condensers, "it is normally considered good practice to design the discharge lines so that pressure drop is limited to approximately 2 p.s.i.g. unless smaller lines are required to obtain satisfactory velocities for the entrainment of oil," he said.

"It has been found that discharge gas velocities in vertical risers with upward flow must be at minimum of 1,500 f.p.m. in order to carry along entrained oil. Minimum gas velocities of 750 f.p.m. are generally adequate on horizontal runs. However, such horizontal runs should always be pitched downstream in order to facilitate movement of the oil which is carried along the pipe walls," commented Leegard.

Extreme care must be taken when paralleling compressors which have multiple condensers, he cautioned, because "pressure drop is of extreme importance here; ½ lb. of pressure drop is equal to 1 ft. of head of liquid."

"If there is very much pressure

drop in the equalizer line, one condenser will be robbed of liquid entirely by forcing it into the other condenser because of pressure difference. This will probably result in pumping over a lot of hot gas into the liquid line."

Using Oil Separator In Hot Gas Line

Use of an oil separator in the hot gas line was also discussed by Leegard, who indicated that it offers certain advantages.

"Line sizes may be increased because, with the minute quantity of entrained oil that will leave the oil separator, the velocities of the refrigerant are not as critical as in systems where oil separators are not used."

"The hot gas oil separator is useful on a system with capacity modulation where the gas flow and velocities vary widely. An oil separator has an additional virtue in that it acts as a surge chamber or muffler and reduces hot gas pulsations."

"When installing hot gas oil separators, it is important that they be in a location where the temperature during the 'off' cycle will not be less than the liquid receiver temperatures," he cautioned. "This is necessary because liquid refrigerant will be condensed in the oil separator if it is at a temperature below that of the liquid receiver. This liquid will then be returned to the crankcase and may cause lubrication failure."

"If there is a possibility of this condition being encountered, one means of preventing extreme condensation in the oil separator is to install a check valve in the line near the condenser."

Described by Leegard as "the most critical problem in a refrigeration system of piping," the suction lines must be properly designed and constructed to return refrigerant gas and oil while the system is running and prevent at all times the return of liquid or oil to the machine as



Service & Supplies

slugs that can damage valves and cause the compressor lubrication system to fail.

Horizontal suction lines, he said, should be sized to obtain a minimum gas velocity of 750 f.p.m. while vertical risers should get a minimum velocity of 1,500 f.p.m. Velocities as high as 3,000 f.p.m. may be needed for satisfactory oil return in large suction lines in systems operating at extremely low pressures.

Normally the suction line pressure drop allowed is equivalent to a 2° F. change in saturated refrigerant temperature.

"This means a very small pressure loss in low temperature systems because at -20° F. 'Freon-12' has a pressure change of 0.70 p.s.i. for a 2° F. saturation temperature change," as compared with a 1.8 p.s.i. change at 40° F.

Sizing Vertical Risers

"When vertical risers are sized to provide satisfactory minimum velocities, the pressure drop in them is increased appreciably and the horizontal lines must be sized to keep the total pressure drop within the allowable limits," Leegard suggested. "These horizontal lines must be pitched downstream to induce free draining for the piping runs, and no long traps or dead ends can be permitted in such lines because oil will separate out and come back in the form of slugs with possible harm to the compressor."

"If a pump-out cycle is not used, the line from the evaporator should always be dropped to a short trap having vertical and horizontal dimensions as short as fittings will permit immediately at the evaporator. The reason for this," he explained, "is that the refrigerant and oil remaining in the coil after a cycle can drain into the compressor and cause dam-

age on the next start-up. Suction lines may be installed free draining if a pump-out cycle is used since only the residual oil in the piping can collect at the compressor."

The problem of maintaining proper suction line velocities to return oil is complicated when capacity modulation of the compressor is employed, Leegard pointed out. A suction line riser properly sized for operation at reduced capacity may have excessive pressure drop or noisy operation at full capacity.

Dual Risers

A solution for this problem, when two coils are involved, can be the installation of dual risers, each being sized to provide a minimum velocity of 1,500 f.p.m. with only one coil in operation, it was indicated. Suction lines from each drop down into one riser.

Bottom of this riser, however, is looped to provide an oil trap and ties into the common suction line above coil level from the top, providing an inverted trap to prevent drain-back of oil.

Traps in the suction line at the compressor are recommended by Leegard when compressors are hooked up in parallel but not for single compressors.

"In single units where all cylinders are operating at one time and the suction piping is correctly sized, we are concerned only with the oil that collects during the 'off' cycle since all properly installed systems have traps in the suction line near the evaporator," he explained.

"The oil that does collect will be from the suction line only and will normally represent a reasonably small amount which can thus be accommodated by being taken into the intake valve while the compressor accelerates at the start."

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CHECKING PLANS for an air conditioning installation are Joseph Meyer and Harry Levine of Atmospheric Control, veteran Detroit contracting firm which recently moved into its own new building.

Veteran Contractor Incorporates Years of Sales, Service Experience Into New Bldg.

DETROIT After 17 years in a downtown office building, Atmospheric Control Co., veteran air conditioning contracting firm here, now occupies its own modern building in the northwest section of the city.

Harry C. Levine, who heads up Atmospheric Control, Worthington distributor, designed the one-story structure himself, and it has a number of interesting features, including year-round air conditioning.

Front section of the building, which takes up most of the 60 by 90-ft. lot, provides a general office section and four private offices, while the entire rear section is devoted to the shop and stockroom of parts for service.

Beyond this is parking area.

Front vestibule of the building is a little larger than might be expected and has a built-in writing desk.

"We designed this for the use of subcontractors who can come in and take data off our drawings and specifications without interfering with the routine of our office," explains Levine.

Fluorescent lighting in the private offices as well as the general office section is "split" so that each fixture, or row of fixtures, is controlled by an individual switch.

"This costs very little extra and avoids shadows," Levine said. "We also had conduit for the telephone

wires installed beneath the floor so that desks can be placed in the center of rooms if desired without unsightly wires."

Interior of the offices is finished in modern plywood and knotty pine walls with acoustic ceiling.

"The combination of acoustic ceiling and air conditioning, which lets us keep all the windows closed, makes the offices very quiet, even despite the heavy traffic out front," Levine points out.

The year-round air conditioning system consists of a forced air heating plant with a cooling coil installed in the duct leaving the furnace, the coil being connected to a 5-hp. hermetic compressor mounted on the floor beside the furnace.

Air is delivered to the offices through concealed ducts and is discharged into the areas through Tuttle & Bailey ceiling diffusers. Return air is picked up at floor level and run through tile crack to the furnace. Before it actually gets into the fan and filter section of the furnace, however, the return air is mixed with outside air brought in from the roof. Proportion of fresh to recirculated air is controlled by a manually adjusted damper in the outside air intake.

The air conditioning equipment is located at one side of the rear shop area, which has a door on the alley big enough so that trucks can be driven directly into the shop for loading or unloading.

A special feature of the shop is a new Superior "Rapid Charger" for refilling of service drums from the large 145-lb. refrigerant cylinders.

"Don't know now why we didn't have something like this years ago,"



AIR CONDITIONING

Arizona X-Ray Truck Equipped with Cooler

PHOENIX, Ariz. — A refrigerated air conditioning unit was recently installed in the mobile X-Ray truck operated by the Arizona state health department. The installation was made both for personal comfort and to keep the X-Ray tube from overheating.

Dr. C. G. Salisbury, director of preventive medicine for the department, said that the interior of the truck is usually 20° F. hotter than outside temperatures. In the warmer sections of the state, the X-Ray technician sometimes has to keep patients waiting until the X-Ray tube cools off so that another picture can be taken.

The truck is on the road constantly and has taken more than 500,000 X-Ray pictures in an effort to detect tuberculosis in early stages. Where tuberculosis is detected, the pictures are being turned over to local physicians.

'Hot' Night Club Air Cooled

MIAMI BEACH, Fla. — Air conditioning equipment is now being installed in Helene Polka's Jungle club, Miami nitery, and extensive interior decorating also is being undertaken.

Featuring "the hottest girl shows between the north and south poles" the Jungle will remain hot, despite the cool temperature of the air conditioning machinery, Miss Polka promises.

In the current show there are Tana Louise, Lana Laney, Lago, Ingrid, and others, as well as the Voodoo chorus.

Thomas D. Cartledge Appointed President of Linde Air Products

NEW YORK CITY—Thomas D. Cartledge has been appointed president of Linde Air Products Co., a division of Union Carbide & Carbon Corp., it was announced by Stanley B. Kirk, Linde's chairman. Cartledge has been senior vice president of Linde and a director and vice president of Dominion Oxygen Co., Ltd., a Union Carbide subsidiary.

Cartledge attended Erskine college in South Carolina. He entered the U. S. Navy as an enlisted man at the beginning of World War I and rose through the ranks to lieutenant (j. g.). Upon leaving the service, he was employed by Linde as a salesman, assigned to a Cleveland territory.

Within a short while, Cartledge was appointed district manager in Kansas City, and later he held the same post in Dallas. In 1925 he was transferred to Linde's general sales management staff in New York, and later became manager, gas sales.

After holding the position of assistant general sales manager and general sales manager in 1940 he was elected vice president. Four years later he became senior vice president, director, and a member of the executive committee of Linde.

Barrett of Oil-O-Matic Div. Dies of Heart Attack at 41

NEW YORK CITY—W. C. Barrett, eastern area field sales manager for the Williams Oil-O-Matic Div. of Eureka Williams Corp., died recently of a heart attack in New York's Grand Central Station. He was 41 years old.

He had left his office in the Chrysler building and was en route to his home in Stonington, Conn., when he was stricken.

Barrett recently had been appointed to his position after serving as Oil-O-Matic's special representative for unit sales in the division's eastern area.

50 years ago this month,
Willis H. Carrier founded the
air conditioning industry

A printer in Brooklyn was having his troubles. Moisture content of the air was making his paper swell and shrink. But nobody could do anything about that . . . or could they?

Willis Carrier, then a young engineer with Buffalo Forge Company, thought he could. He designed a system that controlled the temperature and relative humidity in that print shop, winter and summer. This was the pioneer air conditioning installation.

Dr. Carrier and his associates formed the company which today leads the industry. And Carrier Corporation has virtually written the history of air conditioning. Carrier created the machines, opened the markets, blazed the trails.

That you are kept comfortable by air conditioning in bus, plane and train . . . restaurant, store and theater . . . office, factory and home . . . is due to the pioneering of this one company.

But Carrier has made even more important indirect contributions to your well-being. For air conditioning is also a production tool that is essential to the manufacture of synthetic fabrics, radar and electronic equipment, pharmaceuticals, precision aircraft parts, optical instruments, photographic film and scores of other products.

Air conditioning is an important part of your life today. But tomorrow it will be more important. For this industry of ours is very young. And its field of service is unlimited.

Carrier

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for 50 years—the people who know air conditioning best

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Now 100% improved—and 100% foolproof with new fiberglass depth filter for increased filtering capacity—and new MOLDED Remco Drying agent for increased moisture-absorbing capacity and improved efficiency. Also with silica gel. Capacities 1-1/2 thru 5 tons. Send for descriptive folder.

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ZELIENOPLE, PA.



Bendix Washer--

(Concluded from Page 1, Column 3) and the drier are constructed to be set flush against each other and flush to the wall to eliminate dirt-catching cracks and hard-to-get-at openings.

Features of the new tumble action washer includes the "Magic Heater" which makes wash water hotter. The new suspended timer delays the washing cycle until the tub is filled, regardless of water pressure.

The Bendix "economy" models, the Economat and the Dialomatic, both use the flexible, Metexalloy tub which is exclusive with the Bendix. The Economat is completely automatic with the same timer and thermostatic water control as the more expensive models. Duration or sequence of the cycle can be varied.

The Dialomatic model is designed for use in apartments and small homes. It requires no plumbing connections and is fully automatic except for filling.

Bendix driers are available in either gas or electric models. The electric drier is a combination 110-220-volt model, while gas driers may be had for natural, manufactured, or LP gas. All models are fully automatic with time and temperature controls.

In all models it is possible to vent the exhaust heat outdoors, Bendix says, since the blower forces air through the drying cylinder and out the vent.

Bendix distributors, introducing the firm's new 15th anniversary line of washers and driers to dealers all over the country, are hammering away at the need for down-to-earth selling and thorough briefings on synthetic fibers and how to wash them.

The same themes were pounded at them in two jammed two-day sessions at the home office in South Bend.

Hotpoint Plans--

(Concluded from Page 1, Column 3) separation probably will be completed within another year or two.

Hotpoint refrigerators are now manufactured in an eastern factory. This fall, however, the company will begin retooling its defense factory in Cicero for production of a new line of Hotpoint refrigerators.

This plant was originally designed for refrigerator production, then altered before completion to supply jet engine components for the Navy. Now, the company's jet engine schedules are tapering off, and by autumn retooling for refrigerators can begin. Although Hotpoint will continue to make the jet components, the bulk of manufacturing space will be devoted to refrigerator output.

In its big range factory across the street, Hotpoint is also producing General Electric ranges. When the separation of the two companies is complete, this plant will be used exclusively for Hotpoint production. G-E range manufacture will be transferred to Appliance Park, Louisville.

Hotpoint President John C. Sharp sees the company's own refrigerator facility in Chicago putting the firm in a better competitive position on this appliance.

This arrangement, he believes, will permit integration of engineering, manufacturing, and production services that have been centralized in the Chicago area. He notes that the refrigerator and range plants are connected by conveyerized overpasses which permit fabrication operations to be carried on in one plant and assembly functions in the other.

Controls Law--

(Concluded from Page 1, Column 3) them or their suppliers or subcontractors from getting materials needed to fulfill contracts.

6. Extends the life of the Small Defense Plant Administration until June 30, 1953.

7. Abolished the Wage Stabilization Board but replaced it with another one with no controls over labor disputes. Made up of labor, industry, and public members who must be confirmed by the Senate, the new board will recommend to the Economic Stabilization Agency head general policies and regulations to stabilize wages and interpret—when asked—the application of wage policies and regulations to particular situations. The present WSB will continue until July 29.

Frigidaire Sales--

(Concluded from Page 1, Column 4) effect of the steel strike on Frigidaire and its suppliers. As it looks now, we probably could continue present schedules for several weeks before being forced to shut down operations because of the strike.

The stimulating effect of the recent siege of hot weather was given as an important reason for the improvement in refrigerator and air conditioning sales.

He also cited the removal of Federal credit restrictions and the reduction in prices on certain Frigidaire household products as contributing reasons.

"Apparently many customers who were waiting for lower prices now are buying as a result of these price adjustments," he said.

Lehleitner Distributes Bendix In 2 States

SOUTH BEND, Ind.—George H. Lehleitner & Co., 601 S. Galvez St., New Orleans, has recently been appointed a wholesale outlet for Bendix Home Appliances, a division of Avco Mfg. Corp.

George H. Lehleitner, president of the new Bendix outlet, pointed out that the company has been in business since 1935 and only recently moved to its huge new quarters on S. Galvez St.

Walter Hobson of New Orleans is vice president and general manager.

The firm will handle a complete line of Bendix automatic home laundry equipment and will service dealers through most of Louisiana and Mississippi.

NEXT QUESTION, Mr. Boyersmith!

Graber's
450 WEST FORT STREET
DETROIT 26, MICHIGAN

March 15, 1952

Mr. George F. Taubeneck
450 West Fort Street
Detroit 26, Michigan

Dear Sir:

The appliance dealers of this city are considering an association.

We would appreciate your judgment and advice as to how to formulate a concrete plan and regulate same.

If possible I should like to have the fundamentals used by other associations. We believe that some type of organization will be beneficial to dealers and customers alike.

Thanking you in advance for a prompt reply, I am,

Very truly yours,

J. F. Boyersmith
J. F. Boyersmith
Mfr. Appliance Dept.
Graber's
Muskegon, Ia.

Graber's
450 WEST FORT STREET
DETROIT 26, MICHIGAN

March 17, 1952

Mr. George F. Taubeneck
450 West Fort Street
Detroit 26, Michigan

Dear Sir:

After reading Chapter 24 in "Both Feet on the Ground," I have the answer to many of the questions I asked in my letter to you of March 15. Please disregard my letter unless you have more suggestions for our benefit on the subject.

I am,

Yours truly,

GRABER FURNITURE COMPANY

J. F. Boyersmith
J. F. Boyersmith

JFB:j

THE QUESTION:

How to formulate a concrete plan for and regulate an Appliance Dealers Association?

THE ANSWER:

CHAPTER 24 IN—

"BOTH FEET ON THE GROUND"

The Appliance Dealer's Handbook

Every day appliance retailers like Mr. Boyersmith tell us that their copy of Both Feet On The Ground provides the right answers to hundreds of problems dealers must face in today's increasingly competitive market.

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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Two-Temperature Refrigerators (3)

In the previous instalment, the use of the secondary system to refrigerate the 40° refrigerator compartment from the 0° freezer compartment was described and mention was made of the difficulty in properly controlling both temperatures with one thermostat controlling machine operation, under conditions of variation of load on either of the two compartments.

If the thermostat is actuated by the 40° compartment, control of the 0° temperature suffers; if the thermostat is actuated from the 0° compartment, control of the 40° compartment suffers.

However, there are ways to partially compensate for this imbalance of control; and two very ingenious systems are typical of some of the means that are open to clever design engineers. Both of these systems provide acceptable control of temperature of the two compartments.

CONTROL FROM THE 40° COMPARTMENT

Fig. 4 shows one of these systems, in which control of machine operation is by a thermostat in the 40° refrigerator compartment.

As in all true two-temperature refrigerators, the freezer is in a separate compartment, insulated from the refrigerator compartment. The liquid refrigerant from the condenser passes through the liquid line and the capillary tube and into the evaporator in the freezer, in the usual manner.

PLATE COIL COOLS SECONDARY

After leaving the freezer evaporator, the refrigerant, now mostly a vapor, passes through a small plate coil in the refrigerator compartment, and then back through the suction line to the compressor. The thermostat controlling the operation of the compressor is attached to and actuated by this plate coil.

The upper loops of the secondary system are in contact with the plate coil and the lower loops are in contact with the outside of the bottom liner of the refrigerator compart-

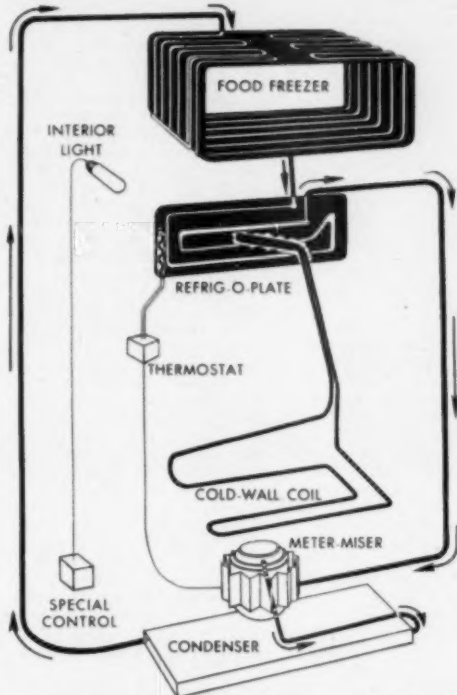


Fig. 4—Two-temperature system, with compressor operation controlled from "tail-off" plate coil in refrigerator compartment. Secondary system refrigerated from plate coil. Auxiliary thermostat for low ambient temperatures turns on refrigerator light and starts compressor from heat from the light.

ment. Thus, the refrigerator compartment is cooled directly by the plate coil and also by the secondary system, which gets its refrigeration from the plate coil instead of directly from the main evaporator in the freezer compartment.

The plate coil is "tailed off" from the freezer evaporator, and the capillary is sized and the refrigerant charge is adjusted so that when the compressor is running, very little liquid refrigerant gets to the plate coil, the refrigerant in it being mostly in vapor form, partially saturated and partially superheated.

PLATE COIL ACTUATES THERMOSTAT

Since the thermostat that controls compressor operation has its bulb attached to the plate coil, its cut-off is affected largely by the temperature of the freezer evaporator as well

as by the refrigerator compartment. The thermostat is set to cut off at about 0°, so the temperature of the freezer evaporator must be satisfied before the compressor stops.

The temperature of the plate coil is also affected by the refrigerator compartment, for the plate coil gets heat directly from the refrigerator compartment. Also heat is being carried to it from the refrigerator compartment by the secondary coil; and this is especially true during the off cycle of the compressor, for secondary circulation continues during the off cycle, although at a diminishing rate.

Moreover, since the plate coil contains mostly vapor and is but a thin sheet, it warms up fairly fast, but without materially affecting the temperature of the freezer evaporator.

The thermostat is set to start the compressor at 36°, so the plate coil fully defrosts before the compressor starts; that is, the plate coil operates on a "defrost cycle" and defrosts itself between each running cycle of the compressor. Thus high humidity conditions, favorable for fresh foods, are maintained in the refrigerator compartment. Excessive humidity is prevented by removal of moisture by the cold plate coil.

REFRIGERATOR LOAD AFFECTS CUT-IN

There is no direct control in the freezer, so its rise in temperature must depend upon whether unfrozen foods or water are put in it, and upon how long the machine stays off, and the latter in turn depends upon the amount of load on the refrigerator compartment. Under ordinary, normal conditions, there is sufficient load on the refrigerator compartment to cause the machine to operate often enough and for a sufficient percentage of the

time to keep the freezer evaporator active and the freezer compartment down to around 0°.

The exception to this condition can be a very light load on the refrigerator compartment. The thermostat might keep the machine off so long that the freezer temperature might rise too much—so that the frozen foods might start to thaw.

The most common and likely cause of very light load on the refrigerator is a very cool room. In today's homes this is not too likely; if the temperature of the kitchen goes below 60°, the rest of the house is apt to be uncomfortably cool too, so the furnace is started.

AUXILIARY THERMOSTAT

To guard against this contingency, an auxiliary thermostat could be provided for the freezer evaporator, with its contacts in parallel with the thermostat on the plate coil, so that the machine would be started if the temperature of the freezer evaporator tended to rise too high.

However, since a low ambient temperature is the chief cause of light load on the refrigerator compartment and consequently of long off cycles, the manufacturer chooses to place the auxiliary thermostat outside the refrigerator, that is, in the machine compartment.

It is set to close at 60°, so if the room temperature drops to 60°, which

is considered the lowest temperature at which the ambient load is enough to cause sufficient machine operation to maintain near 0° temperatures for the freezer compartment, this auxiliary thermostat closes and comes into action.

But it does not directly start the machine; it turns on the refrigerator light for a short time. The heat from the refrigerator light affects the thermostat on the plate coil, which in turn starts the machine.

This forced operation of the machine refrigerates the freezer and the refrigerator compartments, both of which need refrigeration by this time, (the freezer probably needs refrigeration worse than the refrigerator compartment). This forced operation also helps humidity and air circulation in the refrigerator compartment.

This unique method of forcing machine operation indirectly through the refrigerator light, but actuated from ambient temperature, although intended primarily to maintain sufficiently low freezer temperatures despite low ambient temperatures, serves also as some protection to the equipment itself from liquid slugging and kindred troubles, when the refrigerator is located in unusually cool places such as back porches, cool basements, or other places having subnormal temperatures.

(To Be Continued)

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BUSINESS AND sales executive available after July 10th. Years with corporation experience in industry. Abilities: establish and develop sales outlets. Handle and train sales personnel at all levels. Get along with people. Assume heavy responsibilities and make decisions. Right age. Aggressive. Large following of distributors, jobbers and representatives nationally. BOX 4038, Air Conditioning & Refrigeration News.

SALES EXECUTIVE with engineering education and keenest knowledge of Science of salesmanship. Particularly gifted in organizing, developing and directing "specialty-salesmen." Intense competitive spirit and inspirational leadership. Expert at originating sales plans, sales programs and sales presentations. BOX 4040, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER 27 years' experience. Qualified by experience to manage large service department, determine load conditions and select proper equipment, instruct and train dealer service departments or assume administrative responsibilities. Have addressed industry group meetings on technical subjects. Now located on west coast. Would like suitable position in this area. BOX 4043, Air Conditioning & Refrigeration News.

GRADUATE ENGINEER Air conditioning and refrigeration specialist. Age 24. Experience in sales and application engineering. Also supervision of air conditioning equipment testing laboratory. Desires position with manufacturer, distributor, contractor, or consultant around the Los Angeles area. BOX 4044, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

AAA1 MANUFACTURER of automatic ice cube and baked ice machines has openings for four district men—west coast, east coast, middle west and south. Only men with successful sales background in commercial refrigeration will be considered. Liberal guaranteed draw and expenses against commission. A real opportunity for right men for permanent connection at high income. If interested, write giving full details about sales experience. Give references and present status. Ice Machine Division, AMERICAN GAS MACHINE COMPANY, Albert Lea, Minnesota.

SALES ENGINEER. Excellent position open with a fast growing aggressive Frigidaire dealer. Applicant must have ability to handle air conditioning jobs. Liberal salary and commission plus expenses to right man. Call or write for interview. RADOE REFRIGERATION, 3235 W. Vernor, Detroit 9, Michigan, Vinewood 1-1200.

MAJOR MANUFACTURER with district sales office in Houston, Texas, requires the services of a sales manager qualified to assume responsibility of district operations. Must have some knowledge of mechanical refrigeration. Please state your qualifications in your first letter, with a picture if possible. All replies will be held in strict confidence until such time as an interview can be arranged. Write BOX 4027, Air Conditioning & Refrigeration News.

GRADUATE MECHANICAL engineer, BS degree with minimum of 2 years' experience in air conditioning system design. Supervisory service experience helpful but not necessary. Position permanent. Starting salary \$500.00 with regular automatic increases. Liberal vacation, sick leave and other benefits. Some travel. Location: midwest. BOX 4031, Air Conditioning & Refrigeration News.

OPPORTUNITY FOR a refrigeration application engineer. Must have some experience on self contained chest and upright freezers and domestic refrigeration systems. Plant located in Philadelphia, Pa. area. Write giving full refrigeration details, age and salary expected. BOX 4041, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

450 SERVEL REFRIGERATORS—1946 model (R400) 4 cu. ft. Used; perfect operating condition. For mfd, natural or bottled gas. Clean, attractive, modern. \$25 each, min. quantity 40—low delivery cost anywhere. First lot of 400 went fast—Call, write, wire. BEACH REFRIGERATION CO., 30-05 Boulevard, Rockaway Beach, N. Y. Neptune 4-4850.

SOFTIE MACHINES—Money making continuous freezers for soft ice cream or frozen custard, famous make. One is new in original crate, two used in good condition. Back in service so must sell at real sacrifice. This is really too good to miss! Write Lt. P. J. BERNHEIM, 2834 Humboldt Ave., El Cerrito 9, Calif.

FOR SALE—60 ton cooling equipment as follows: with magnet starters and automatic controls; 2 Frick 4 cylinder Freon compressors 4 1/2 x 4 1/2 Model F.W. 440; 2 40 H.P.—300 volt—3 phase—60 cycle 1750 R.P.M. motors; 8 Aero fin coils, 4 pipes deep, 18 pipes high 8 1/2" x 26"; 1 80 ton Buffalo fan 22" x 42" delivery 29,000 C.F.M.; 2 new American coils 20000. BOVAL REALTY CO., 312 28th Street, Union City, New Jersey.

512 BUYS standard brand 1/2-HP open type or sealed type complete units. Other sizes up to 3 HP. Write for complete listings on units and parts, including Kilowatt overload relays. BE MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 2, N. Y.

SACRIFICING MODEL FDS18A 18 cu. ft. display freezers with superstructure and Thermopane glass sliding doors. Only \$540 each, f.o.b. New York. List price \$714. For complete details, write or call MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., New York, Gramercy 3-8000.

ATTENTION SERVICEMEN—Send for our new catalog—no control valves, relays, brass fittings, V-belts—hermetic and open type units. All new merchandise at great savings up to 50%; sold on money back guarantee. WALTER W. STARR REFRIGERATION, 2835 Lincoln Ave., Chicago 13, Illinois.

MILLS AUTOMATIC ice cube makers, brand new, in original crates. Very, very cheap. To be sold only slight draft bill of lading or certified check with order. W. J. TRIMBLE, 4452 West Henrietta Rd., West Henrietta, New York.

BUSINESS OPPORTUNITIES

FOR SALE. Established commercial refrigeration sales and service business in Lynwood, California, a suburb of Los Angeles. Consists of new stucco Building, stock and complete shop equipment. Doing good business. Selling because of illness. BOX 4055, Air Conditioning & Refrigeration News.

APPLIANCE, FURNITURE and paint store located 70 miles north of San Francisco. Grossing \$5,000 month. Refrigeration service exclusive within 20 mile area. Price \$3,000 plus \$1,000 inventory, includes truck and shop equipment. Modern building 60 ft. frontage, full basement with repair shop. Four room apartment in rear. Building may be leased or purchased. BOX 4042, Air Conditioning & Refrigeration News.

MISCELLANEOUS

"SEALED UNIT Rebuilding-Basic Tools & Methods" now in its third and final printing. This course of trade secrets gives complete information on equipping a shop to handle this work. Information found nowhere else. \$12.50 while supply lasts or write for details. H. CUSTER, Box 98, Center Line, Michigan.

NORGE SEALED units remanufactured or exchanged. Immediate delivery from stock, 2 year warranty, Freon refrigerant. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Sets of three, \$1.15 plus postage. MODERN REFRIGERATION CO., INC., 12541 E. McNichols Road, Detroit 13, Michigan.

EXCELLENT OPPORTUNITY FOR ALERT MANUFACTURERS' REPRESENTATIVES IN SEVERAL TERRITORIES NOT NOW COVERED WHO WILL CALL ON REFRIGERATION MANUFACTURERS AND WHOLESALE JOBBERS

Complete, aggressive cooperation of home office engineering staff at all times. Write for details and advise territories you can conveniently cover, and other pertinent data such as present lines being handled. All replies will be held in confidence. Box 4036, Air Conditioning & Refrigeration News.

There's always one that's better... and in controls it's Ranco!

Refrigeration men know that trouble is eliminated when Ranco controls take over. That's why they have specified and installed the more than 35,000,000 Ranco controls in actual use today. Insist on Ranco controls yourself—available for more than 4,000 replacement installations.

Ranco Inc.

COLUMBUS 7, OHIO

WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS



NEMA Refrigerator Sales Reach 255,009 Units In April, First Four Months Total 1,106,384

Summary for April and First Four Months, 1952
Complete Refrigerators Only—Sales by Sizes—Units

APRIL (16 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.	—	—	—	—
2. 4 cu. ft.	1,191	—	546	1,737
3. 5 cu. ft.	—	—	—	—
4. 6 cu. ft.	18,980	190	3,341	22,411
5. 7 cu. ft.	30,639	2,095	3,309	36,043
6. 8 cu. ft.	50,778	346	3,486	54,610
7. 9 cu. ft.	47,417	4,811	4,300	56,528
8. 10 cu. ft.	23,639	2,312	1,070	26,921
9. 11, 12, 13 cu. ft. & up	53,360	1,254	1,653	56,267
10. Total	225,904	11,508	17,507	255,009

FIRST FOUR MONTHS (16 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.	—	—	—	—
2. 4 cu. ft.	5,658	—	1,244	6,902
3. 5 cu. ft.	—	—	—	—
4. 6 cu. ft.	74,955	364	12,971	88,290
5. 7 cu. ft.	107,000	4,975	9,855	121,830
6. 8 cu. ft.	240,323	2,698	17,662	260,683
7. 9 cu. ft.	245,912	7,558	10,994	264,464
8. 10 cu. ft.	127,385	3,857	4,395	135,537
9. 11, 12, 13 cu. ft. & up	221,930	1,504	5,164	228,598
10. Total	1,023,093	20,956	62,263	1,106,384

Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolerator Co.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Norge Div., Borg-Warner Corp.; Philco Corp.; Refrigeration Div.; Sanitary Refrigerator Co.; Seeger Refrigerator Co.; Westinghouse Electric Corp.

Refrigerator Sales -

(Concluded from Page 1, Column 2)
units for the month, 238% better than March and 13% above last year. In fact April sales accounted for more than half of Canadian sales for the first four months of the year.

Other foreign sales were down, but not as much as domestic sales. They were off 2% from March and 32% from last year. For the four months, both Canadian and other foreign sales were 26% behind the 1951 mark.

Refrigerator Sales by States to Dealers By Distributors

Summary for First Three Months, 1952

Sales of Electric Household Refrigerators
By Distributors to Dealers—By States

Reports were received from 14 companies

STATES	UNITS
Alabama	10,771
Arizona	3,689
Arkansas	8,851
California	46,728
Colorado	5,991
Connecticut	10,561
Delaware	1,514
District of Columbia	7,562
Florida	17,368
Georgia	15,001
Idaho	1,774
Illinois	33,685

Indiana	17,572
Iowa	9,813
Kansas	7,527
Kentucky	10,814
Louisiana	10,363
Maine	2,704
Maryland	9,439
Massachusetts	17,402
Michigan	24,842
Minnesota	10,068
Mississippi	8,052
Missouri	22,530
Montana	14,209
Nebraska	5,709
Nevada	815
New Hampshire	1,949
New Jersey	22,713
New Mexico	1,985
New York	69,584
North Carolina	14,209
North Dakota	2,912
Ohio	35,875
Oklahoma	12,420
Oregon	5,896
Pennsylvania	44,625
Rhode Island	5,555
South Carolina	8,386
South Dakota	2,031
Tennessee	15,197
Texas	36,004
Utah	2,955
Vermont	950
Virginia	12,370
Washington	4,982
West Virginia	9,800
Wisconsin	12,700
Wyoming	1,040

Total United States 603,745
Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolerator Co.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Norge Div., Borg-Warner Corp.; Philco Corp.; Refrigeration Div.; Westinghouse Electric Corp.

Macy's Signs Fair Trade Contracts for New Stock

NEW YORK CITY—Macy's, New York, until recently one of the firmest foes of retail price fixing, has signed "an appreciable number" of fair trade contracts in the last month, according to *The New York Times*.

Quoting trade sources, the newspaper said the department store "will continue to take on increasing quantities of new merchandise with retail price minimums fixed by manufacturers."

A Macy spokesman declined to say how many fair trade agreements had been signed by the store in the last 30 days because such information was competitive, the *Times* stated.

The spokesman called attention to a statement made last April by Jack I. Straus, president of the parent R. H. Macy & Co., Inc. This statement revealed a modification of Macy's attitude toward fair trade.

Straus reiterated the Macy policy of offering the widest assortment of merchandise and added:

"There are some desirable lines of merchandise which belong in such a wide assortment, but which we can make regularly available only if we sell them at prices dictated by the manufacturer. Therefore we have decided to offer Macy's customers the convenience of buying those items at fixed prices."

This statement, the Macy spokesman told the *Times*, reflects a modification, not a reversal, of the concern's views on fair trade. The spokesman denied reports that Macy's was out to stock as many fair traded products as possible.

Room Cooler Shortage Grows -

(Concluded from Page 1, Column 5)
which was the biggest month in our history on room air conditioners.

"How much we can produce will depend on the steel situation, especially as it affects those who supply components to us. We're concentrating all our production on ½-ton and ¾-ton units."

(In connection with this latter statement, it is interesting to note that where distributors or dealers had much inventory left, it was of the ½-hp. units. Most buyers seemed to want to make certain that they got plenty of capacity.)

While conceding that the heat wave had supplied the big impetus to the record-breaking sales boom, the Federal-Quigan sales manager believes that the phenomenal sales achievement would not have been realized if manufacturers, distributors, and dealers had not done the improved advertising and sales promotion job that they have done this year.

"By constant hammering we have shown that the room air conditioner is a proved item, and that it will provide the comfort that people seek in the summer months, so that when this thing hit there was no hesitancy to buy," Mitchell declared.

In the northern part of the country, where such prolonged heat waves are a rarity, some dealers in metropolitan areas reported selling more than 50 units a day, while some distributors had moved out 500 and more units in a day at the peak of the first rush of demand. But what is possibly more interesting is that south of the Mason-Dixon line, where it is almost always hot for five to six months of the year, the buying frenzy

was just as great as that in the north. In Atlanta, "people have gone air conditioning crazy," declared W. D. Leathers of Delta Heating Co., as he sold the display unit out of his window, the last one he had in stock.

Another Atlanta dealer, C. R. Fincher of Mechanical Specialties, Inc., declared he had received a shipment on a Tuesday morning and was sold out before Tuesday noon. M. W. Pierson of Engineering Contractors, Inc., stated that one man bought six units for his home.

When asked if the supply was tight, B. A. Bartlett of Brown Distributing Co., declared:

"Tight? No! We just don't have any. I've had 25 calls for the things in the last 25 minutes."

In Dallas, Texas, where the volume was high last year but dealers suffered because the market was oversupplied and price-cutting hurt profits, sales were booming—and at advertised list prices. One distributor reported several hundred sales already lost because of scarcity of merchandise.

Some Dallas dealers reported a preference for 1-ton units on the part of prospective purchasers, even though a ¾-hp. unit would seem to fill the bill for the space to be conditioned. Apparently there has been a feeling that some units sold had been "under capacity" to do the kind of a cooling job that would satisfy the user.

WHY WAIT?

Get your new product info
pronto. Use coupon on
"What's New" page in this issue.

New Improved Line Of

Universal Cooler Remote Units

COMPLETE RANGE OF SIZES FROM ¼ TO 15 H.P.



When you are looking for a line of remote units for applications up to 15 H.P., investigate this new, improved Universal Cooler line now available to the jobber trade. The medium range (¾ to 3 H.P.) incorporates the recently developed series of "V" type compressors and the new FFP with oil pump (¾ H.P.). These compressors are designed for maximum efficiency, lower cost, compactness of size and increased capacity. All of these factors are powerful selling points for you when selling these units to the field. The lower range (¼ to ¾ H.P.) uses the dependable "Chief-tain" compressors and the high range (5 to 15 H.P.) uses the well-established series of 3 cylinder Universal Cooler compressors.

Included in the remote line are air cooled models from ¼ to 3 H.P., combination air-water cooled models from ½ to 3 H.P. and water cooled models from ½ to 15 H.P.

The complete line also includes hermetics from ½ to ½ H.P. and self-contained units from ¼ to ¾ H.P. Look to Universal Cooler for a complete line of quality units for all of your refrigeration requirements up to 15 H.P. See this line and investigate the possibility of a Universal Cooler franchise in your area today.



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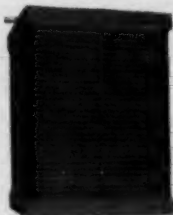
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